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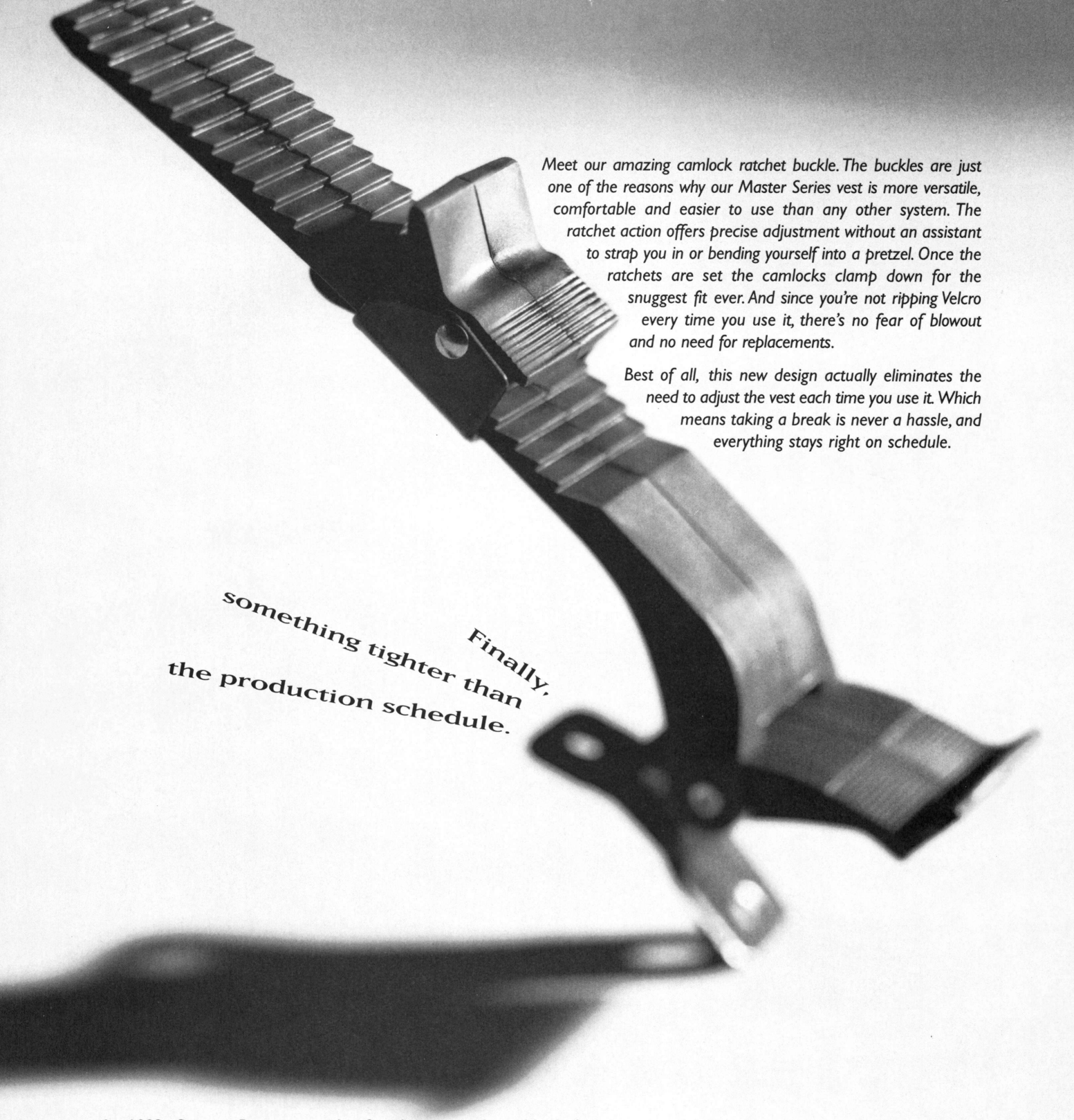

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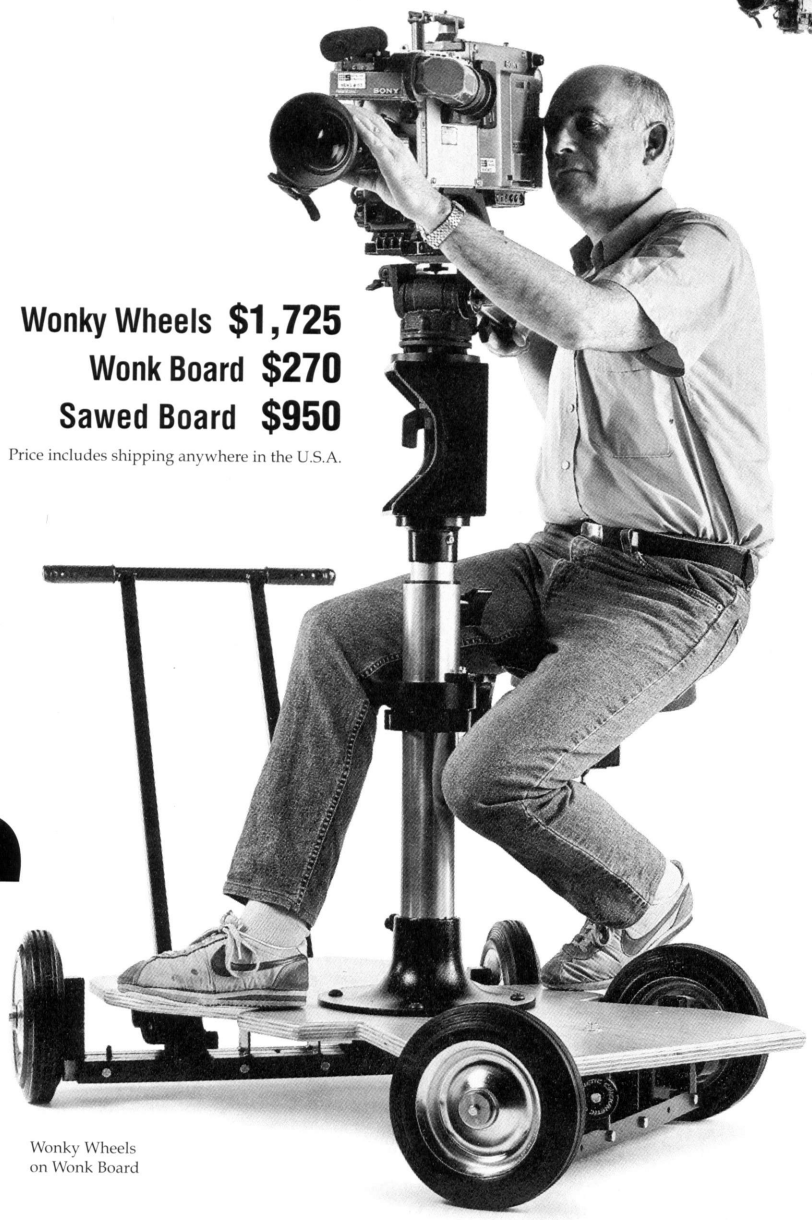

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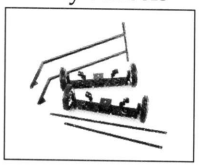
on Wonk Board

Wonky Wheels



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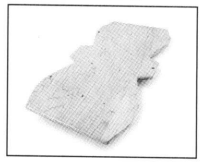

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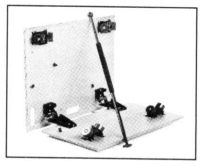

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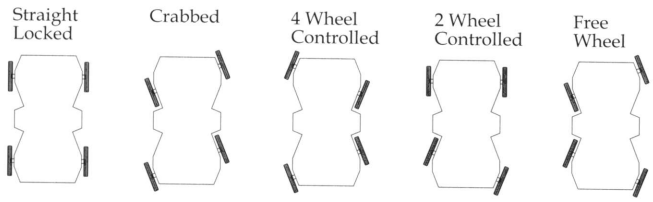

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The International Journal of Film and Electronic Production Techniques

February 1997 Vol. 78 No. 2

American Cinematographer

Features

90

20 Inside Panavision
Camera company christens new headquarters

40 Chasing Greatness
Owen Roizman is honored by ASC peers

48 George Lucas: Past, Present and Future
AC visits with visionary filmmaker

55 Saving the *Star Wars* Saga
Restoration team revamps original film

60 An Expanded Universe
ILM helps George Lucas augment sci-fi classic

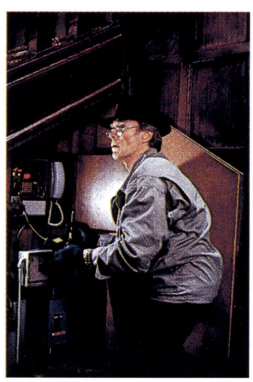
72 Foul Play in High Places
Absolute Power reveals state secrets

82 Hemingway *In Love and War*
Epic film depicts author's romance

96 The Look of Love
Authentic, erotic ambience heats *Kama Sutra*

103 One State Fits All
A tour of North Carolina's burgeoning film scene

109 The World on a Shoestring
Around the World in 80 Days trots across globe



72

Departments

10 Letters

14 Digital Perspectives

18 Production Slate

90 Beyond the Frame: *Rosewood*

114 New Products

123 Points East

125 Books in Review

127 Classified Ads

134 In Memoriam — Murray Alvey, ASC

135 In Memoriam — Jordan Cronenweth, ASC

136 From the Clubhouse

On Our Cover: Darth Vader returns to threaten the galaxy anew in the *Star Wars* Special Edition (artwork courtesy of 20th Century Fox and Lucasfilm Ltd.).

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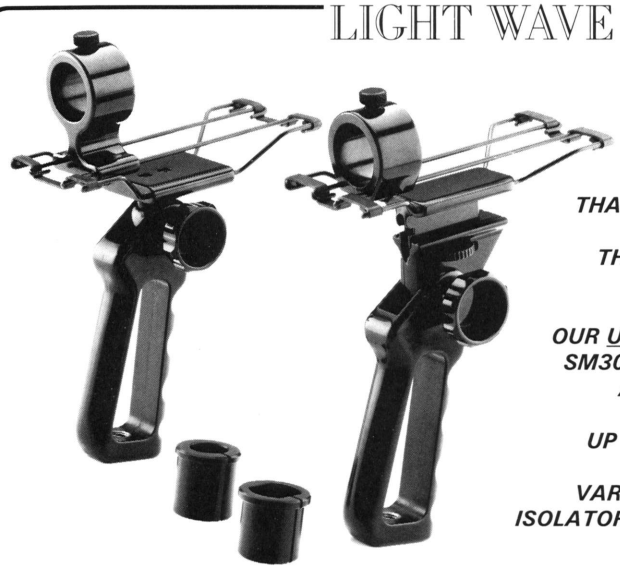

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American **Cinematographer** (ISSN 0002-7928) established 1920 in 78th year of publication is published monthly in Hollywood by ASC Holding Corp., 1782 N. Orange Dr., Hollywood, CA 90028, U.S.A., 1-800-448-0145, 213-969-4333, Fax 213-876-4973. **Subscriptions:** U.S. $40; Canada/Mexico $55; all other foreign countries $65 a year (remit international Money Order or other exchange payable in U.S. $). **Advertising:** Rate card upon request from Hollywood Office. For **East Coast & Midwest sales (203) 761-9804, FAX (203) 761-0090, 387 Danbury Rd., Wilton, CT 06897.**

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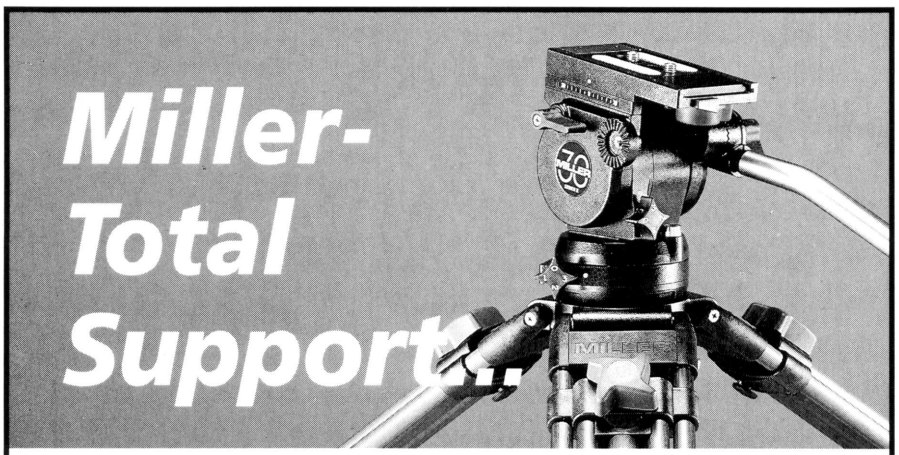

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On the Clairmont 1000, focussing is smooth, easy and *internal;* no vibration. It works with the ARRI Studio Follow Focus and its flexible whip control; no vibration. The Follow Focus engages at the point of balance, right above the gear head's axis. No vibration.

Follow focus *and* watch the action

Another way our lens helps make your work look better: you can follow focus while looking at the subject. Standing up and facing you on top of the lens, at the front, is a big focus/distance scale.

That's in addition to the usual scale on the side of the lens, naturally. Also on the side of the lens: a Sports Finder, with cross hairs. It helps you to hunt for moving action with your other eye.

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With telephoto lenses, filters on the front degrade the image. So we've built a three-stage filter holder at the back – 4×4 square filters. Two of them rotate, so you can use polarizers and grads. You can also screw a round filter inside the back of the lens.

Bill Bennett puts our lens to the test

Hollywood cameraman Bill Bennett owns eighteen lenses, including an 800mm Canon T5.6. He has used a 1000mm Clairmont on two commercials – both times wide open. He ran his dailies at Raleigh Studios on a 14 foot screen.

On one of the commercials, the director wanted a tight close-up of a military jet fighter taking off. Wingtips sticking out of frame left and right. He also wanted a backlit silhouette against the sky – *Top Gun* style. And he wanted to see the jet's exhaust flame.

Tight closeup, wide open, subject moving at 150 miles per hour

To see the flame against the sky meant shooting very late in the day. That meant a fast lens. Tight framing meant a very *long* lens.

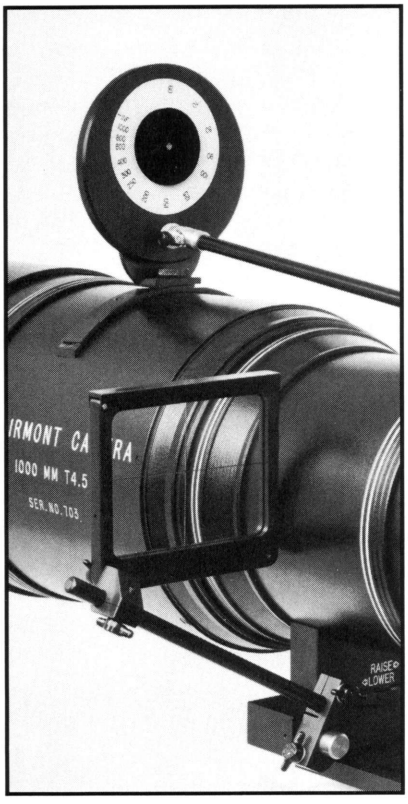
Backlighting meant shooting into the sunset sky, probably wide open. The fading light meant not many retakes. The plane would be moving past and away at 150 mph. *No problem.*

"We disguised part of Mojave Airport as a military base and we set up as close to the runway as we were allowed to get," says Bill Bennett. "With the light going, we knew we'd get only a few shots at the takeoff. So I had two cameras rolling."

800mm as backup on second camera

"As a backup, I had my 800mm Canon set up on the other side of the runway, shooting the same (but opposite) angle. Three-quarter rear view of the jet fighter taking off against the blue hills and banking steeply out of frame against the orange sky."

"When the plane entered frame, it was about 700 feet away, going away from us. With the 1000mm, the frame was a little under 15 feet wide at 700 feet. The plane's wingspan was 22 feet. Just right."



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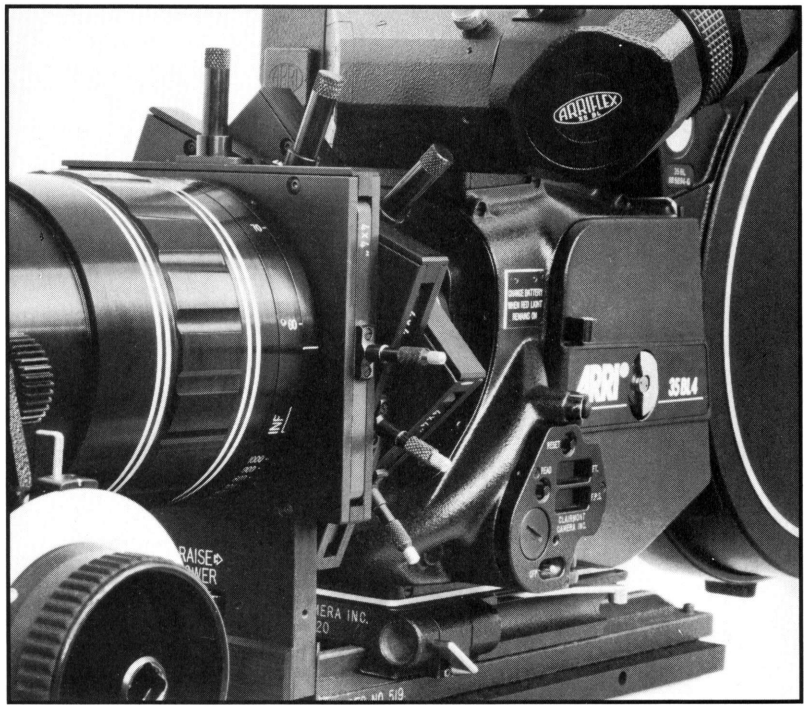

Rotating filter stage at *back* of Clairmont lens

"To fill the frame with the 800mm, we would have had to pick the plane up sooner and pan with it. *You* try that—with an 800mm lens wide open and an airplane going by at 220 feet per second!"

Fast follow focus

"Kirk Bachman followed focus on the Clairmont lens. The front-mounted distance pointer really made *his* day. If he'd had to look down at the scale on the lens barrel, by the time he looked *up* again the plane would have been 200 feet further away."

"We wanted the plane to be a strong black silhouette against the sunset sky, with sun highlights glinting off the aluminum wings. A lens with flare or low contrast would have turned that to mush. But the 1000mm gave us a superb cookie-cutter image."

> "The Clairmont 1000 was as sharp as my 5.6 Canon 800. And somewhat *more* contrasty. I was surprised."

Comparison with the 800mm Canon

"So now we didn't have to use the 800mm version," says Mr. Bennett. "But I *did* get to compare the footage at the dailies. The Clairmont 1000 was as sharp as my 5.6 Canon 800. And somewhat *more* contrasty—I was surprised. Anyhow, we couldn't have got that shot without it."

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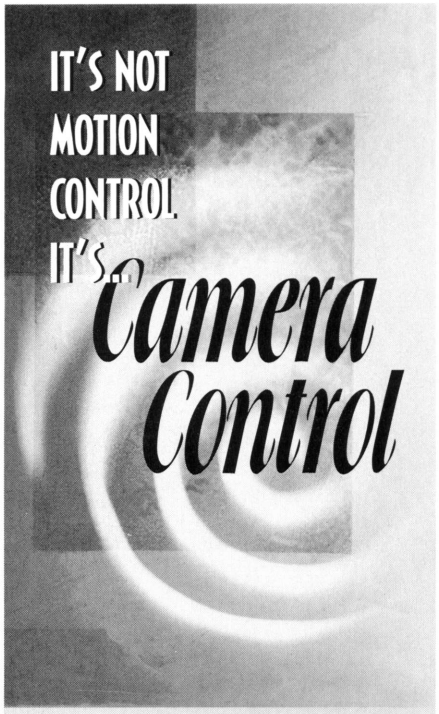

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Letters

Sir Sydney Speaks

With regard to Stephen Pizzello's article *Arri Illuminates British Contingent* in your October 1996 edition, I am afraid I have to take issue with my longtime friend, veteran cameraman Paul Beeson, BSC. According to the article, Paul agreed (with Kevin Rowley) that U.K. municipalities are not film-friendly; that people don't help much in England and are not interested; and that it's difficult to get permits to obtain local authority cooperation. This is simply not the case!

It's always difficult filming in a city. "London is no different than Paris in this respect," said the late Louis Malle to me when he was misquoted about his experiences of shooting in London. Life and business must go on, traffic has to sort itself out and residents are entitled to respect for their well-being, particularly at night. Nevertheless, permits to shoot in our cities are made available on a regular basis. The key to achievement is to have an experienced, understanding and tactful location manager on the show, and to enlist the support of the local film commission. Normal day-to-day requirements are met with little difficulty, but miracles are also possible: seven cherry pickers and five generators were parked in the heart of the City of London for *Mission: Impossible;* one whole side of Trafalgar Square was sealed off for *101 Dalmatians;* and a road in South London was recently closed for seven consecutive nights to accommodate the upcoming Bill Murray vehicle *Watch That Man.* I believe these are fair examples of the way we service the film needs of filmmakers in Britain.

The British Film Commission, with its central government funding, supports a network of 21 national, area and city commissions spread all over the UK. In action for little over a year, the London Film Commission is already big and busy. The BFC is in place to provide an initial point of reference for producers' inquiries — in effects it's "one-stop shopping." We are a conduit to the experience, local expertise and enthusiasm of the entire commission network in our nation of nations — England, Northern Ireland, Scotland and Wales.

— Sir Sydney Samuelson, CBE
British Film Commissioner

Super 8 Sound Debate

During the Seventies, I had the extreme pleasure of working with single-system SOF systems in Super 8 and 16mm for news, industrial and documentary filmmaking. Not having to have the second piece of gear or an extra body was a wonderful freedom. (No offense to sound folks, but when you're working on a practically non-existent budget, the "crew" might consist solely of yourself). These were great cameras: the CP 16; the Bolex Pro; the Arri BL; Beaulieu's News 16. Let's not forget those wonderful Super 8 SOF cameras; Wilcam made a marvelous machine that took single-strand Super 8 film.

What I'm getting at is this: what's wrong with resurrecting these great old machines and converting them to record on digital mag-striped stock? Wouldn't this be the answer to a low-budget or student filmmaker's dreams? If anyone out there is interested in converting such a beast, I can be reached at (904) 781-6772.

— V. Martin Hamrick
Jacksonville, Florida

Errata

In Ron Magid's December '96 article on the special effects for *Star Trek: First Contact* ("Where No *Trek* Has Gone Before") ILM's associate visual effects supervisor George Murphy was misidentified. The staff of *American Cinematographer* regrets the error and any inconvenience it may have caused Mr. Murphy, and sincerely hopes that this mistake will not lead to our assimilation by the Borg collective. ◆

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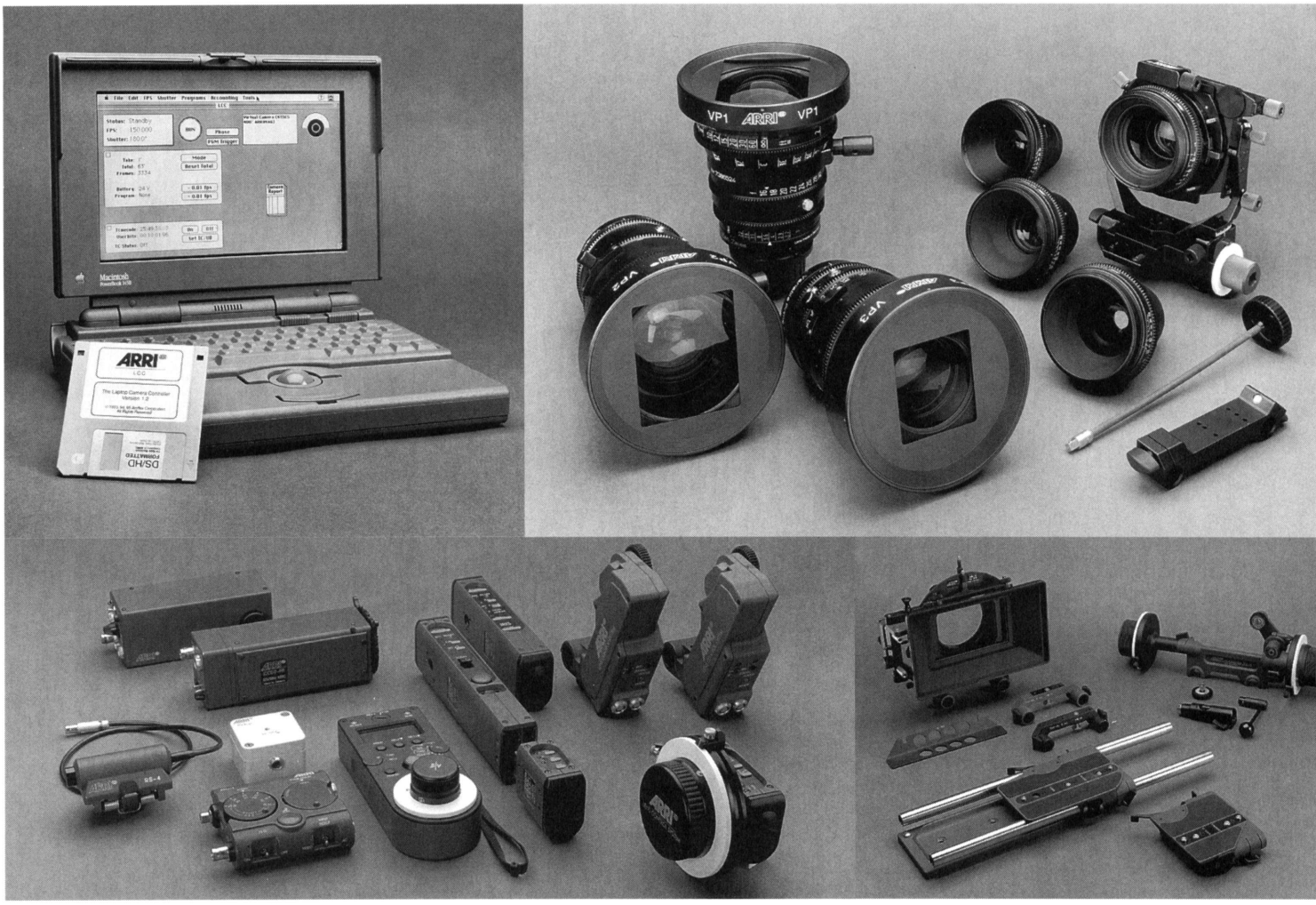

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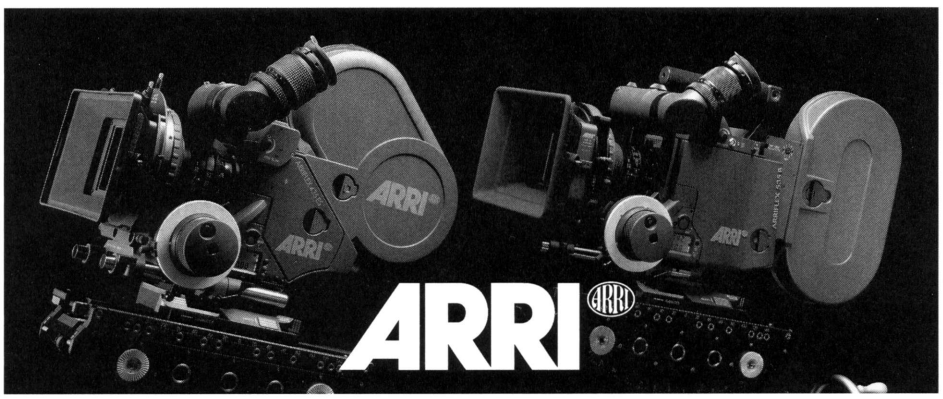

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Sony Shrinks HDTV to Fit Betacam

by Frank Beacham

Anyone who has produced images in high-definition video is well aware of the equipment's shortcomings. Like machines from the early days of television, the production gear has the reputation of being bulky, expensive and always in need of a video engineer's tender loving care.

Now, with the widespread use of HDTV on the horizon, Sony is creating a new version of its popular Betacam camcorder for portable field acquisition of HD video. The first prototype of the new camcorder is scheduled for completion in mid-1997.

The new HD Betacam format was first described in a technical paper on HDTV compression at the recent International Broadcasting Convention (IBC) in Europe; the system provides a glimpse of where Sony plans to take the venerable Betacam format, which was introduced in 1982 as a portable news acquisition system.

Sony notes that breakthroughs in the miniaturization of integrated circuits and the maturing of compression algorithms has finally allowed the company to create a one-piece HD camcorder with the size, weight and power consumption of today's Betacam systems.

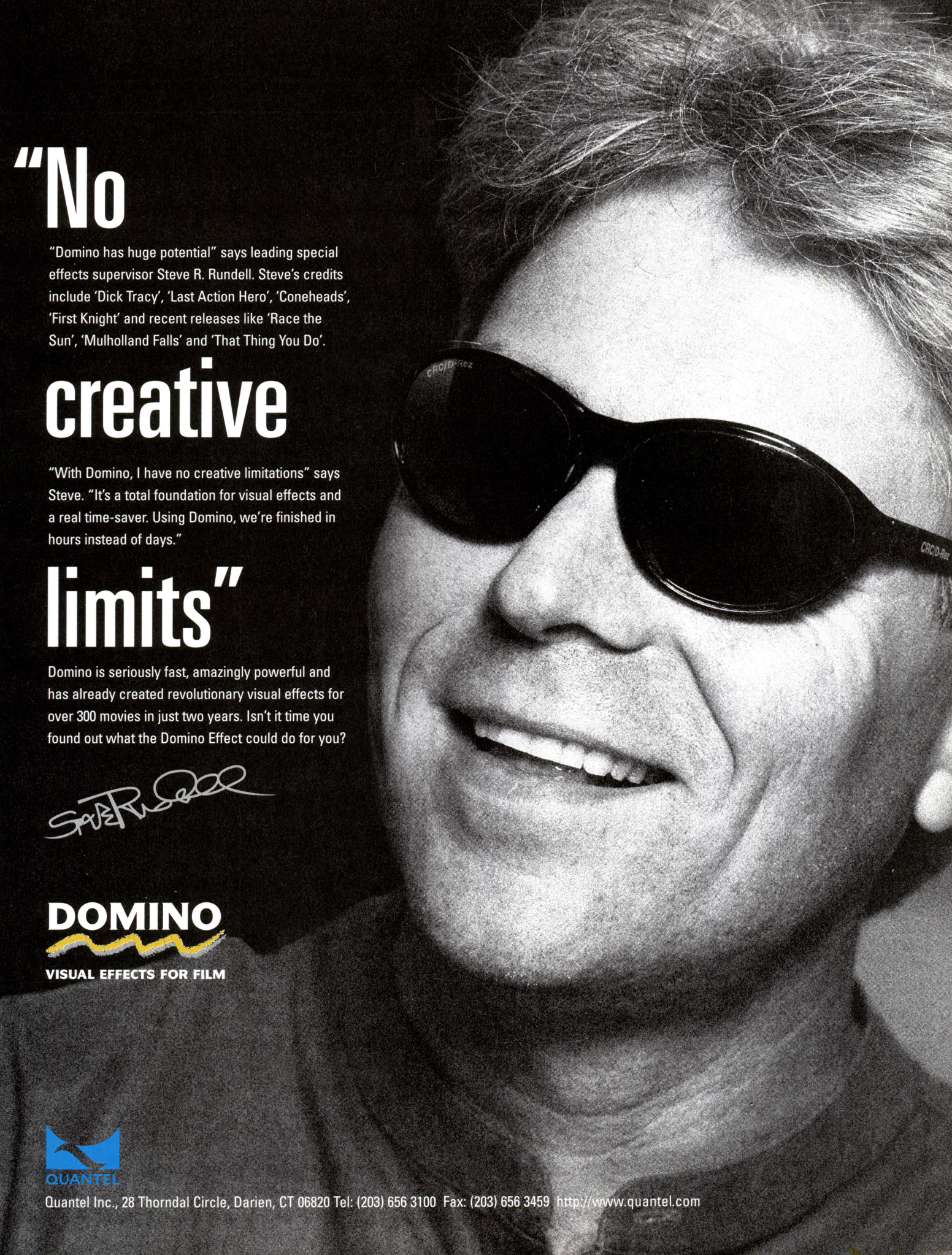
Reducing the unwieldy HD recording components to camcorder size was an enormous undertaking. The video data for a high-definition television signal consists of 1920 x 1080 x 30 luminance and chrominance pixels each second; this pixel rate registers at slightly more than 124M pixels/sec. The data must be highly compressed in order to be stored on a practical and affordable recording device. In addition, part of the recorded bandwidth must be allocated for error protection and several digital audio channels.

Through experimentation, Sony's engineering team managed to squeeze the HD data tight enough to allow two hours of recording time on a Beta-sized half-inch videocassette. First, to improve compression efficiency, researchers used intra-frame processing rather than intra-field processing. Then Sony's workers employed a 3:1:1 spatial filter to reduce the number of horizontal luminance samples per line from 1920 to 1140 and the number of chrominance samples per line from 960 to 480.

"The choice of a horizontal only filter was made to [enable the design of] a low-power, lightweight camcorder implementation as well as [to ensure] that the multi-generation performance would not be unduly affected," writes the Sony research team of C.H. Gillard, J.J. Stone and T. Hayasaka. "The 3:1:1 filter offers 8/5 to 1 bit rate reduction. To accomplish an overall 8-to-1 compression then requires the BRR (bit rate reduction) algorithm to achieve just 5-to-1 compression."

The Sony team says that its 3:1:1 system offered a suitable level of picture quality for HD "ENG" applications. However, Sony's crew found that the screen could be further enhanced with additional improvements in the compression architecture. This led to an investigation of the usage of picture information. "It is known that areas (in the picture) which have high activity can be more heavily compressed due to the masking effect in these areas," says the Sony report. "The effect is also to allow more bits in plain areas where the distortion is more easily detectable."

Application of an activity technique to the 3:1:1 pictures resulted in proficient images. Nevertheless, the team made more improvements after recognizing that certain colors emphasized distortion more than others; more bits were assigned to these areas. As a final boost to picture quality, a transport was produced that permitted the compression to be reduced from 5:1 to 4.44:1.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After further studies, Sony's engineers reported that they had developed an HD recording system for camcorder and studio use that optimizes first-generation and multi-generation picture quality, concealment ability, shuttle performance and frame-based editing.

Larry Thorpe, who has led Sony's HDTV efforts in America for more than a decade, says that the new format's picture quality is "quite extraordinary" but cautioned that the system was not designed for acquisition of the full HDTV production standard.

According to Thorpe, the new format was developed for NHK, the Japanese television network, for HD news and sports acquisition. "The imperative was size, weight and power," he says. "It had to be equivalent to Digital Betacam. We wanted the best picture quality possible within that framework. We knew from the beginning that we were building a subset of the standard."

Given the quality of the system's images, Thorpe explains that the IBC paper was "a float" to determine if the new technology might be acceptable for HD broadcast applications in the U. S.. "Recognizing that it is not the high-end production standard, we ask the question: 'Does it have a role in the broadcast studio?"

Sensitive to the current 4:1:1 versus 4:2:2 debate surrounding the use of the DV formats in broadcast environments, Thorpe says that Sony is not changing its position by advocating a future 3:1:1 HD format for broadcast use; the firm merely contends that 4:2:2 is the minimum sampling scheme acceptable for broadcast studio applications. "What we are saying today is that because transmission will be 4:2:0, you can only fill that pipeline with 4:2:2 — 4:1:1 shortchanges it," says Thorpe. "We think that 4:2:2 should be used for mainstream broadcast origination. However, 4:1:1 can play in there for those prepared to pay for a tradeoff in quality."

The new portable HD format, Thorpe remarks, *is* such a tradeoff. "What we are saying openly to the world is that in 1996 we cannot make a 1920 x 1080 portable baseband recorder. What we did do is build a system with the best picture quality possible within the size, weight and power limitations of a camcorder. And those pictures are pretty credible high-definition images." ◆

John Le Blanc on his favorite prime: the Angenieux 17-102.

Director/cameraman John Le Blanc is shooting a Mazda spot on a set in Chicago. On the front of the 535 is the zoom Le Blanc likes to call his "case of primes"—the Angenieux 17-102 T2.9.

Le Blanc and crew have been meticulously lighting and framing a shot that places Chicago Bull Scottie Pippen in the foreground with the car behind him. He arrives to take the place of his stand-in and—yikes—Pippen is at least 4" taller! With the 17-102 in place, though, there's no need to move the camera to reframe the shot. Le Blanc simply zooms to the exact focal length he needs.

Allows More Time to Light.

"I learned how to light from the Europeans—Vilmos and Laszlo," Le Blanc explains. "And that approach takes a little longer. The 17-102 buys me extra time to light, because I'm not moving the camera or changing primes repeatedly. For the Mazda shoot we had Scottie Pippen for only twelve hours and had three spots to do. The 6X17 helped me get the job done."

Maximum Flexibility.

"The Angenieux 17-102 replaces a case of primes as my primary optical tool. I save time by dialing in the focal length I want instead of waiting while it's found in a box, uncapped and mounted. And I don't have to choose between an 18 and a 24. I also have the 19, the 23 and everything in between."

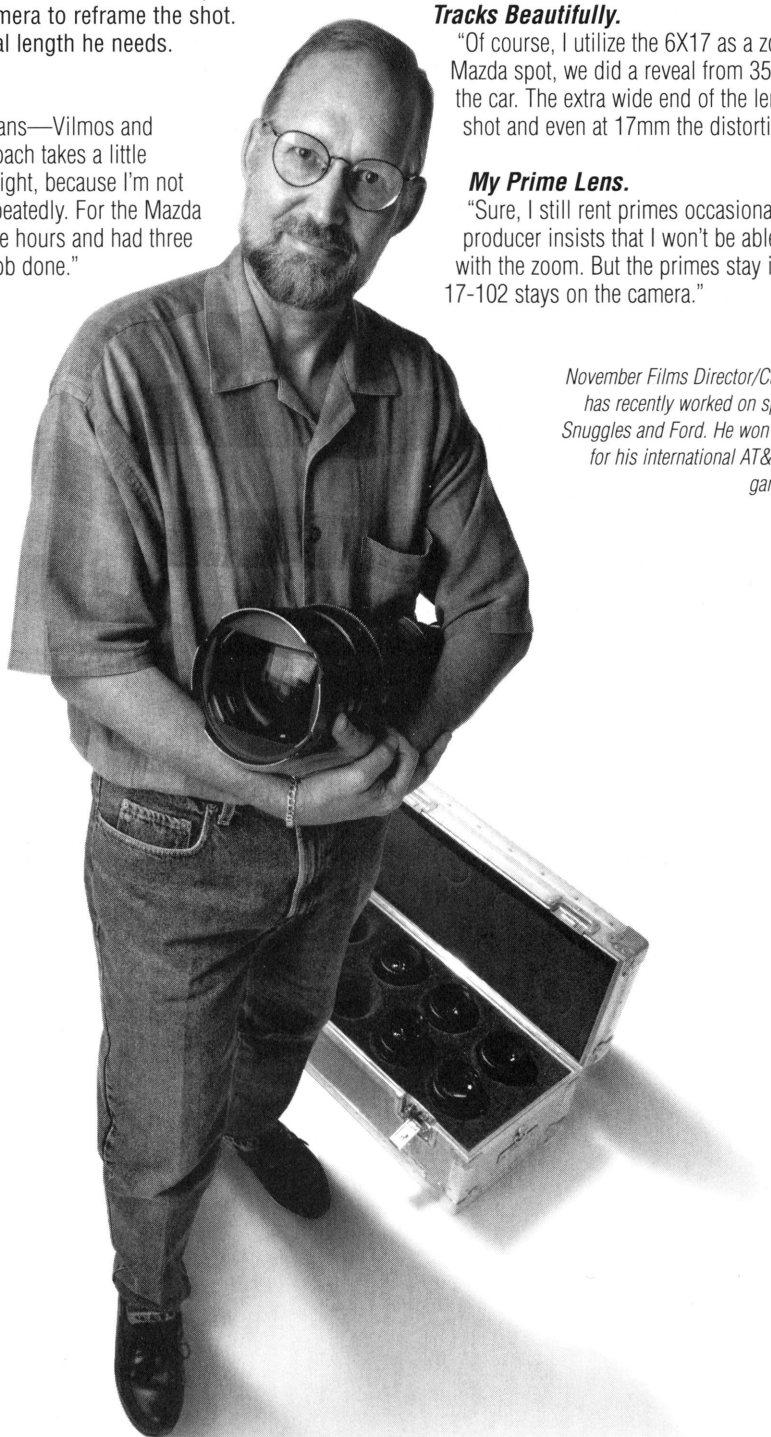
Tracks Beautifully.

"Of course, I utilize the 6X17 as a zoom, as well. For the Mazda spot, we did a reveal from 35 to 17mm—inside the car. The extra wide end of the lens was crucial to the shot and even at 17mm the distortion was minimal."

My Prime Lens.

"Sure, I still rent primes occasionally—when the producer insists that I won't be able to shoot everything with the zoom. But the primes stay in the box, while the 17-102 stays on the camera."

November Films Director/Cameraman John Le Blanc has recently worked on spots for Mercedes, BMW, Snuggles and Ford. He won a Golden Lion at Cannes for his international AT&T campaign and has also garnered four Omni Awards.



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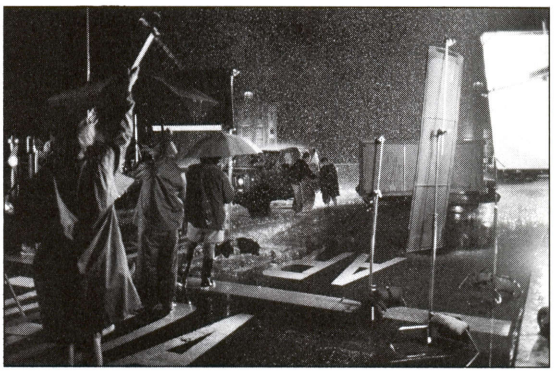
compiled by Andrew O. Thompson

Fools Rush In
by Michael X. Ferraro

As far as Robbie Greenberg, ASC is concerned, *Fools Rush In* was not only the title of his most recent film, but a fair warning for pivotal scenes — complete with live traffic and artificial rain — shot on the mammoth Hoover Dam at the Nevada-Arizona border. Directed by Andy Tennant (*It Takes Two*), the romantic comedy begins in Las Vegas with a one-night stand between stars Matt Perry (TV's *Friends*) and Salma Hayek (*Desperado, From Dusk 'Til Dawn*). From there, we track the trajectory of the couple's subsequent breakup through much of the American Southwest (including New Mexico, doubling for Mexico, and the Grand Canyon).

Greenberg is experienced in photographing the great outdoors, most notably in *The Milagro Beanfield War,* and he has also dealt with lots of hydro power (on *Under Siege II* and *Free Willy*), so he was well-prepared to tackle the



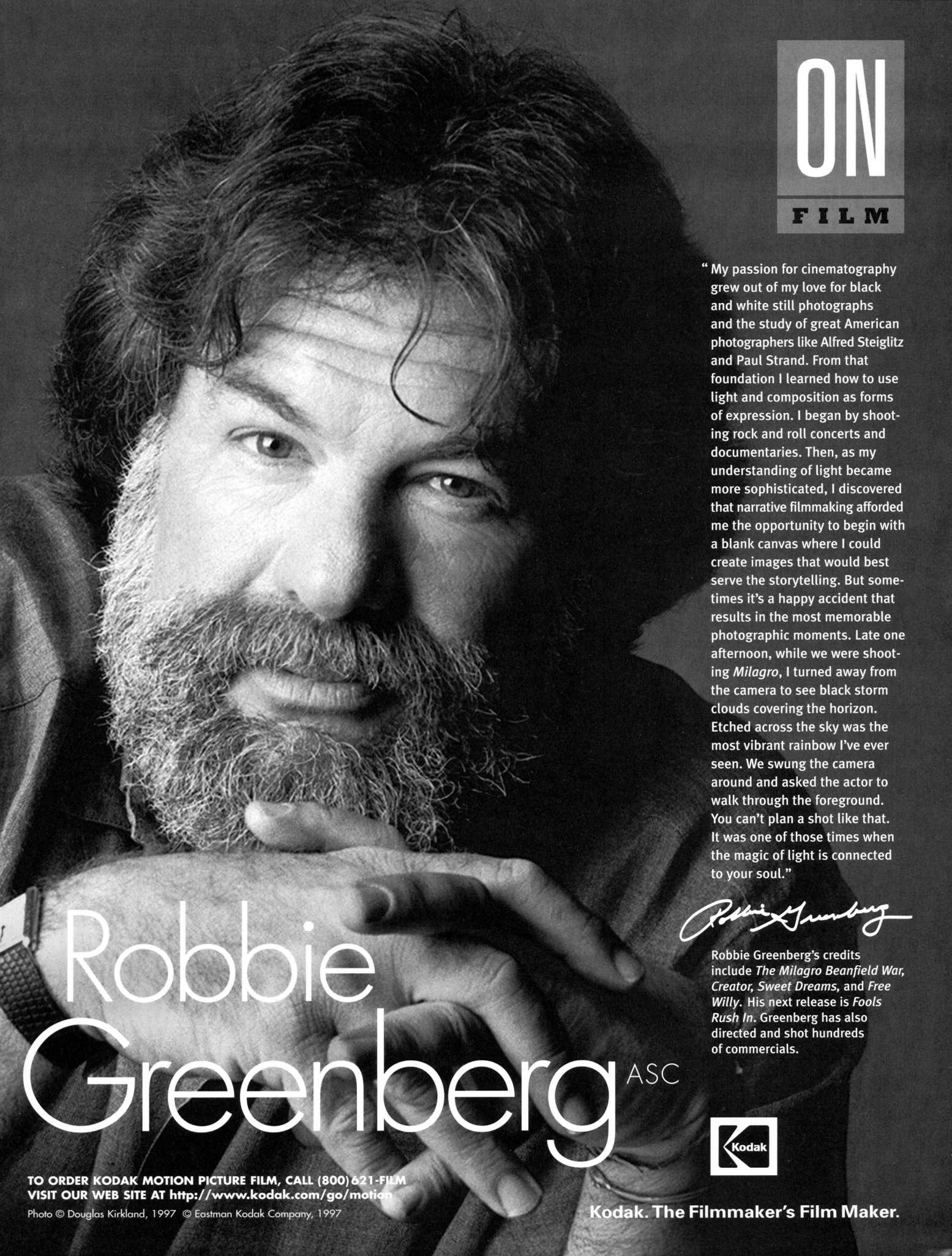
daunting Hoover Dam for *Fools Rush In.* Before production began, however, the cinematographer alerted director Tennant and producers Doug Draizin and Anna Maria Davis to the fact that the script called for both dam sequences to take place at night. "We all begin films with scripts that get changed," Greenberg notes. "Screenwriters do their work with nothing but the creative in mind, but then the practical application of those ideas becomes a consideration. In the case of *Fools Rush In,* I suggested that the first scene in which Salma goes to the dam should take place at dusk instead of at night, so audiences would 'get' the setting. That way, when we returned to it at night, at least viewers would have a sense in their visual memories of where they were. What they didn't see of the place they would bring from memory; they'd know that they were suspended over the dam in mid-air."

After his fellow filmmakers agreed to the change, Greenberg was left with the unenviable task of shooting two major scenes on the Colorado River's 726-foot high, man-made monstrosity. The production faced three major hurdles on the dam: hiding the rain source; lighting the sprawling location; and dealing with the constant traffic.

Greenberg notes that the dam was designed on a slight curve, "which actually was our saving grace. In order to make rain on that scale, we needed lots of rain bars and a very high tower. We were able to hide an industrial crane just around the bend, extend the [150-foot] arm, and position the rain bars out of frame."

Lighting the dam at night presented Greenberg with an interesting dramatic challenge. "The main consideration was just the sheer scope of it," he says. "Every cinematographer knows that when you go to a natural phenomenon at night — such as a landscape — you can rarely do it justice because of the scope. I mean, where do you stop lighting? Every time you turn on another light, you've revealed another black hole. That's why, many times, people will try to do something 'day for night,' or at dusk. The element I *could* control was the lighting on the entire bridge and

Top: *The mammoth set-up of blue HMI fixtures used to illuminate the massive scope of the 726-foot high Hoover Dam.* Center: *Cinematographer Robbie Greenberg makes a last-minute adjustment to his lighting scheme.*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" My passion for cinematography grew out of my love for black and white still photographs and the study of great American photographers like Alfred Steiglitz and Paul Strand. From that foundation I learned how to use light and composition as forms of expression. I began by shooting rock and roll concerts and documentaries. Then, as my understanding of light became more sophisticated, I discovered that narrative filmmaking afforded me the opportunity to begin with a blank canvas where I could create images that would best serve the storytelling. But sometimes it's a happy accident that results in the most memorable photographic moments. Late one afternoon, while we were shooting *Milagro*, I turned away from the camera to see black storm clouds covering the horizon. Etched across the sky was the most vibrant rainbow I've ever seen. We swung the camera around and asked the actor to walk through the foreground. You can't plan a shot like that. It was one of those times when the magic of light is connected to your soul."
Robbie Greenberg's credits include *The Milagro Beanfield War, Creator, Sweet Dreams,* and *Free Willy*. His next release is *Fools Rush In*. Greenberg has also directed and shot hundreds of commercials.
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the equipment storage buildings."

Greenberg used practically his entire HMI package, choosing to enhance the scene with bluish light. To backlight the rain, he deployed a pair of Musco Lights. "We parked them pretty far away, on the switchback, way back up the road [from the dam]."

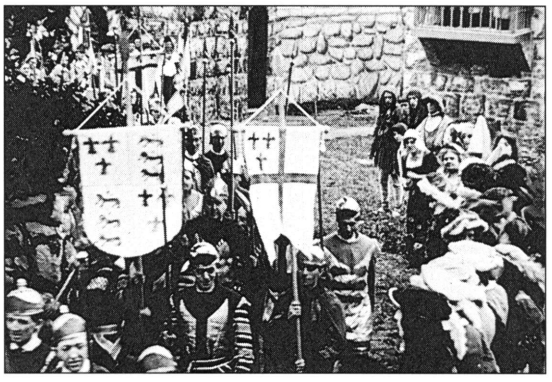
Speaking of parking, the road leading to and from the dam threatened to become a giant, slithering parking lot during the five days that the crew of *Fools Rush In* occupied the Hoover. While Greenberg was surprised that the authorities even granted permission to film on the narrow roadway — a very popular trucking route which is the area's only state border crossing — he points out that the production did not have carte-blanche access. "One of the difficulties was that [the police] would only shut traffic down for 15 minutes at a time," he says. As a result, director Tennant chose to storyboard both of the dam sequences, shot by shot, with his cinematographer. In so doing, the two came up with an uncompromising but effective schedule that "forced us to shoot all of our shots toward Arizona one night, and back toward Nevada the next night," Greenberg recalls. "It meant we didn't have to move the Muscos, so that was the plan of attack."

The minimal number of setups (seven to eight per day) proved crucial, the Bronx-bred cinematographer recalls, "because equipment actually had to be moved once traffic was shut down. We moved the actors in for the 15 minutes that we stopped traffic, marked everything, and then moved them back, [getting the take on the next stoppage]."

Greenberg commended his usual crew, including camera operator Chris Hayes, gaffer Bill Maxwell, first assistant Bill Clevenger, second assistant Karl Linde, and key grip Tim Ryan, for their work on the dam and throughout the production. He also praised the art department, and production designer Edward Pisoni, for their role in visually highlighting the "cross-cultural" aspects of the story.

Fools Rush In was shot in standard 1.85:1 format. Greenberg used Kodak 5298 for night exteriors and interiors, 5293 for most day exteriors, and 5247 for some other exterior situations. Greenberg shot with his usual Panavision Platinum camera package. His arsenal of lenses included Primo primes ("I've been using them since they came out") as well as Canon 150-600mm and Angenieux 25-250mm zooms.

The Angenieux was used to great effect on a tricky aerial reveal shot that Tennant had envisioned of the Grand Canyon. Using the Wescam helicopter stabilized image system, Greenberg "started long on the lens [around 200mm], and pulled back to about 25mm. I don't think you can do that shot on a Tyler mount."



Left: *A gauntlet of maidens greets a knightly procession.* Below: *Actor Frederick Warde makes his mark as the dastardly Richard III.*

Rediscovering *Richard III*
by George Turner

On September 11, 1912, the New York *Dramatic Mirror* ran the following item of interest: "The latest feature to be announced is a five-reel production of *Richard III,* with Frederick Warde in the leading role. The feature is being put out by M. B. Dudley, who has been previously connected with the newspaper and theatrical business. Mr. Warde has been absent from the stage for several years, and. . . has been lecturing on famous Shakespearean plays in which he has appeared. The production is under the direction of James Kean[e], and it is expected that it will be ready for delivery on about Oct. 15, when it will be offered to State-right purchasers."

The emphasis on *feature* is meaningful. No *feature* production — a subject of 40 minutes or more — was made in America prior to 1912, although in Australia and parts of Europe they were well-established. American producers insisted that audiences would not sit through a film of more than one or two reels. However, the 1912 success of Adolph Zukor's imported French feature, *Queen Elizabeth* (starring Sarah Bernhardt) proved otherwise. The first American-made feature was 1912's *Oliver Twist.* The second, *Richard III,* was the first Shakespearean feature made anywhere. Eight features were made that year, but until recently none were known to exist in complete form.

William Buffum, of Portland, Oregon, had nurtured a nitrate print of *Richard III* for 30 years. He recently donated it — in complete and near-mint condition — to the American Film Institute, which restored the print; it is now the earliest complete American feature film in existence. The newly revived *Richard* was recently unveiled at the AFI Film Festival, held in Los Angeles this past October.

Richard III is a handsome production with flawless cinematography, huge sets and hordes of impressively costumed actors. The film is purely visual in concept, and makes no attempt to offer Shakespearean language. In fact, it has fewer intertitles than most silents, a blessing to anyone who has suffered through silent dramas that attempt literary speeches via seemingly endless text.

Prior to the film's production, Dudley, president of Dudley Amusement Co. and Sterling Film Manufacturing Co., established offices on Broadway for The Richard III Film Company, Inc. The principal location was the site of a ruined mansion on City Island in Long Island Sound, off the Bronx. Interiors representing elaborate palace rooms were constructed within the walls. The cellar was transformed into the dungeons of the Tower of London. The courtyard, streets and battlefield were major exterior settings with high "stone" walls and arches.

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Other exteriors, including battlefields, were filmed in Westchester County.

Following the film's main title, Warde, a pleasant, gray-haired man in mufti, acknowledges the audience; another title lists the cast. Neither director nor crew is credited (typical of the period) and the latter have yet to be identified. A 55-minute version of the classic play follows.

The story hews closely to Shakespeare's original text. After the death of Prince Edward of Lancaster, son of King Henry VI, the deformed Richard, Duke of Gloster (Gloucester), schemes to become king. He murders the aged king, and Richard's brother, Edward, becomes king. Richard interrupts Henry's funeral procession to woo and win Lady Anne, widow of Prince Edward. He then tricks the ailing king into thinking that their brother George, Duke of Clarence, is plotting to kill the king's heirs. Clarence is soon murdered, and the king dies, leaving two boy princes, Edward and York, under Richard's protection.

Richard arranges to be "persuaded" to take the throne. He then orders the princes removed from their mother's care and installed in the tower. Richard's henchmen smother the boys and dispose of the bodies, after which Richard tries to make love to his niece, Princess Elizabeth. The Queen summons Elizabeth's lover, the Earl of Richmond, from France. Richard drives Anne to suicide before setting out to do battle with Richmond's forces. That night, at Bosworth Field, Richard dreams that his victims are confronting him; the next morning, he is killed by Richmond.

Warde was born in 1851 in Wardington, Oxfordshire, and began his stage career at 16 as the second murderer in *Macbeth* at the Lyceum, Sunderland. He came to New York in 1874 and appeared with leading stars such as Maurice Barrymore and Edwin Booth. In 1881, he formed his own company and toured for 20 years. Mentor to Douglas Fairbanks and Jeanne Eagels, he has been called everything from "a mediocre traveling stage actor" to "the preeminent Shakespearean actor of the late 19th Century."

When he acted in *Richard III,* Warde was 61 years old — twice the age of Richard when he assumed the throne in 1483. This proved irrelevant, and the actor energetically portrayed Richard as Shakespeare described him: a scowling hunchback with a withered arm and legs of unequal length. There have been efforts to prove that Richard was a good king victimized by slander, but Shakespeare's twisted murderer is enchantingly monstrous. Warde commits evil deeds with contagious gusto. The brutal killings — including those of the princes — take place in full view. When Richard puts King Henry to the sword, he lovingly wipes the blade with his fingers, and flicks the drops of blood away. Moments later, he returns and impulsively gives the body two more thrusts.

"The staging and methods of the moving picture people... were revelations to me," Warde told a Brooklyn *Eagle* interviewer. "I thought I knew all the tricks of acting, but their work was simply amazing to me, and I shall never forget my first experience...

"The director... simply told the other actors... when to look glad or sorry, when to shout and when to fight, without telling them why they did any of these things. It was another matter for me. I simply couldn't act without saying my lines, and I had to suppress all sense of the ridiculous to go through with the thing in such surroundings."

The film's director and anonymous cinematographer were masters of composition. Scenes are photographed in medium long shots, and are very sharp throughout. There are no close-ups save for inserts of letters and documents; close-ups of players were considered grotesque by most patrons at the time. The camera remains stationary except for essential panning shots, but the movement of the actors is impeccable. Interior lighting, probably achieved via the use of Cooper-Hewitt tube lights, is so detailed that nothing escapes the eye. Certain scenes, however, are lit and composed for dramatic impact: the death of Anne is depicted in heavy shadows that silhouette much of the frame, and excellent multiple exposures allow the ghosts of victims to materialize in Richard's darkened tent.

Most of the picture was released on Kodak's sepiatone stock, which rendered the blacks as dark brown. Strong green tones are used for the murders of the princes and for the death of Lady Anne. Richmond's arrival from France is blue-toned. When the ghosts confront Gloster, the screen be-

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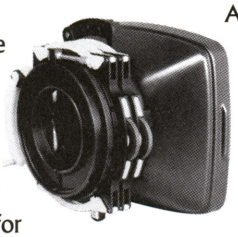

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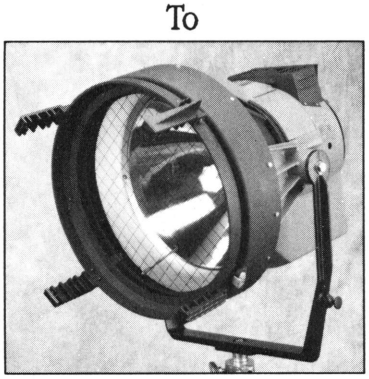
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comes a garish blue-green. All of these tones are perfectly preserved. Tints were added to many scenes, most often a rich ambertone for sunny outdoor scenes, and spot colors applied by a stencil method similar to that used by Pathé in France. Some of these dyes have deteriorated.

On October 9, the *Mirror* noted that *"Richard III,* the important film to be released Oct. 15... was seen at a private view last Sunday... Unusually good photography and able acting have combined to make a winner, if advance reports may be credited."

To handle sales, Dudley set up The Shakespeare Film Co. in the Longacre Building. He advertised *Richard III* as "the sensation of the century... a gigantic production... costing $30,000 to produce... [and featuring] 1,000 people, 200 horses, five distinct battle scenes [and] warships crowded with soldiers. Architecture, costumes [and] armor [are] historically correct in every detail."

In his Brooklyn *Eagle* interview, Warde surprised his stage colleagues by saying that he "simply had not realized before what a great thing moving pictures had become. They are admittedly becoming a great educational factor all over the world, and, especially in France, the acting as well as the plays have reached a high standard, and enlisted the services of real artists.

"Another thing," he added. "Shakespeare's plays can, with a little skillful handling, be made into very effective photoplays. The great plays are so full of real meat that they are wonderful in any form, and it is possible with the camera to get effects on a screen that could not be realized on a stage, visualizing as never before pictures that have been left to the imagination. Of course, to make certain things comprehensible without the voice and lines, it is necessary to interpolate certain incidents to show the motive, but the bard himself would hardly object to this."

In 1916-17, under the auspices of the Thanhauser Film Co., Warde performed in *King Lear, Silas Marner, The Vicar of Wakefield,* and *Hinton's Double,* all directed by his son, Ernest C. He later starred in *The Fires of Youth, Under False Colors* and *The Heart of Ezra Greer, Rich Man, Poor Man* (Famous Players, 1918) and *The Unveiling Hand* (World, 1919).

Warde's autobiography, *Fifty Years of Make Believe*, appeared in 1920. He and his wife, Annie, moved to Los Angeles, where Ernest was a prominent director. Both Annie and son died in 1923. Warde returned to the screen one last time in 1925 as Omar Khayyam in *A Lover's Oath.* The University of Southern California awarded him an honorary doctorate of letters. When his heart failed on February 7, 1935, he was 83 and living at his daughter's Brooklyn home

Even unheard, Warde registers as a strong and likable actor. Actually, his deep, resonant voice exists in a short talking picture produced in 1921 by sound pioneer Orlando Kellum, wherein he recites his own poem, "A Sunset Reverie." Warde was on the stage for 68 years, but his first film has belatedly given him a form of immortality denied to his film-hating colleagues.

Director James Keane was a tall, athletic young man who formed United Keanograph Film Mfg. Co. in Fairfax, California, in 1915. He produced, wrote and directed *Money* (1915), wherein steel workers rebel against tyrannical bosses. James Keane Feature Photoplay Productions in New York subsequently made *The Spreading Evil* (1918), a controversial picture about syphilis; *Come Back Home* (1920); and *Whispering Women* (1921), after which he apparently vanished from the film industry.

Film Commission Updates

Canada

As a result of the quality scouting services and innovative marketing efforts provided by Manitoba Film and Sound Development Corporation, Manitoba recently hosted two offshore production shoots. The Discovery Channel shot portions of a documentary in Selkirk, Elk Island and on Lake Winnipeg at Gimli, spending approximately $70,000 over three days and hiring local crew, actors, and fishermen; Lake Winnipeg stood in for the harsh Siberian landscape. At the end of February, the Belgian TV show *The Dream Factory* also shot on the lake. A 46-year-old woman had her dream come true when she swam three laps in the icy waters in a 15' x 25' "pool" cut from the ice; filming took place over a five-day period and the production spent in excess of $6,000. The film commission for the City of Winnipeg and the Province of Manitoba,

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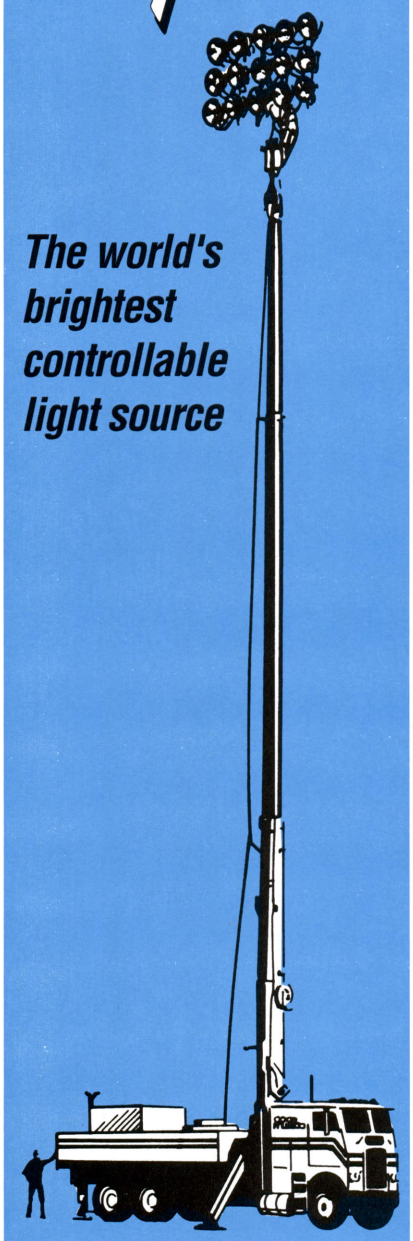
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Manitoba Film and Sound provides a variety of location services. These include publishing a Manitoba production and location guide, maintaining an extensive photo library, assembling pre-scout script breakdowns, arranging scouts and acting as a liason between the industry and all levels of government.

Manitoba Film and Sound, (204) 947-2040, Fax (204) 956-5261.

Florida

The coming-of-age film *Nobody's Children* was shot in Ocala, Marion County, Florida during October and November of last year with several scenes filmed in adjacent counties. The richness of the Ocala region is showcased in the locations chosen by the film's director, Mark Anthony Galluzzo. Scenes took place at a magnificent rock quarry, the University of Florida, country stores, farm houses, a jail, a cemetery and a trailer park.

The St. Petersburg/Clearwater Area Film Commission announced the creation of a $1,000 scholarship that will given away each spring. The purpose of the award is to assist a student with expenses incurred while serving a film-related internship, and is funded from proceeds of the Film Commission's Annual Academy Awards Gala. Scholarship applicants must have successfully completed their junior year at a four-year college or university; be a Pinellas County resident or a student whose permanent address is within Pinellas County; offer evidence of internship opportunity or program with a film, television, video or commerical production company, studio or related company or agency; and present a brief written statement explaining why the applicant is applying and/or what they plan to accomplish during their internship. Top finalists will be asked to an interview. The scholarship will be made directly to the applicant, and financial need will be considered.

Ocala Film Commission, (352) 629-8051, Fax (352) 629-7651; St. Petersburg/Clearwater Film Commission, (813) 464-7240, Fax (813) 464-7277.

Mexico

William Shakespeare's *Romeo and Juliet*, directed by Baz Luhrmann and shot by Don McAlpine, ASC in and around Mexico City — from state-of-the-art Churbusco Studios to the barren badlands of Texcoco; from a "glorieta" in the middle of a fashionable shopping district to the exterior of the famed French-style Chapultepec castle. The production ended its Mexican sojourn on the beaches of Veracruz. All of these locations collectively became Verona Beach.

The metropolis is home to ancient ruins, baroque architectures, mythic winged statues, famous murals, breathtaking collections of art and assorted shrines. The city also harbors garishly hued, modern high-rise buildings, sidewalk vendors hawking folk art, fire-eating clowns performing at intersections, chic restaurants and designer clothing stores.

The Immaculate Heart of Mary Church, which became the St. Peter's church of the play, has a giant "modern gothic" facade, topped by an immense statue of Mary. Its interior features a golden altar, above which soars a huge pastel-colored figure of the Madonna and child, framed by two attending angels. Adjacent to this icon are brightly colored panels that describe the story of Christ. The pink immaculate heart, encircled by thorns, is painted into the walls above her head. This impressive church became the setting for Romeo and Juliet's secret wedding, and served as the site of their deaths.

National Film Commission of Mexico, (525) 549-2375, Fax (525) 549-2347.

New Zealand

Located in the beautiful South Pacific, New Zealand boasts a plethora of incredible, exotic untouched locations and urban landscapes. As an added bonus, the country offers summer in January and snowcapped mountains in July. It is an English-speaking nation with a population of just over 3.3 million people. The two major islands are only 1,000 miles from tip-to-tip, making it possible to travel from golden or black sand beaches to geysers and moon crater landscapes, or from dense sub-tropical rainforests to snowcapped mountain peaks and frozen glaciers — in about as much time as it takes to drive from Long Beach to Pasadena. A wide variety of architecture can be found, from turn-of-the-century gold mining towns to the art-deco enclave of Napier. Also offered are landscapes similar to pastoral English

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countrysides, the European charm of Lake Taupo, New York-like skylines, Alaskan glaciers, Swiss mountains and Yellowstone's geothermal areas.

The nation's popularity as an off-shore location is rapidly growing; during the 1995/96 fiscal year, foreign exchange earnings jumped some 28 percent. Recent feature and TV productions include *The Piano, Hercules — The Legendary Journies, Xena — Warrior Princess, Once Were Warriors, Heavenly Creatures* and *The Climb.* Recently, native director Peter Jackson was credited in an April '96 issue of *Variety* with "Showing Hollywood How to Cut Costs" while working on *The Frighteners*; Jackson plans to shoot his upcoming version of *King Kong* in New Zealand as well. (See *AC* Aug. 1996.)

New Zealand Film Commission, (805) 927-2739, Fax (805) 927-0682.

Virginia

In 1996, Metropolitan Virginia hosted four feature films — *Kilronan, Navy Cross*, the untitled remake of *The Day of the Jackal,* and *Echo Blue.* Feature and commercial production was responsible for over $6 million in production, with an economic impact of $15 million in the metropolitan area. Located in the Piedmont region of the state, Richmond is a haven for many forests, lakes, streams and farmlands. The James River runs through much of the state with "class three" whitewater rapids. The urban area is a diverse mixture of skyscrapers, historic rowhouses, wrought iron, Victorian lattice, Roman columns, Georgian mansions, 16th-century Tudor estates, an Egyptian building and art deco. Filmmakers have used the variety of locales to double as New York, the Iowa farmlands, New Orleans, Washington D.C. and Europe. The area also offers easy access to international and regional airports, and Richmond is home to more than 50 percent of the state's experienced production crews.

Metro Richmond Convention and Visitors Bureau, (800) 782-2777, Fax (804) 780-2577. ◆

For Tom Jewett, expressing a personal vision takes the kind of control that comes from FujiFilm.

Photos: Michael Bulbenko. Film: Fuji Professional Neopan 400

Working in acrylics and spray paint, sometimes adding paper and plaster, Tom Jewett creates color abstracts, some of which he's adapting into artful furniture. He began painting when photography no longer said everything he wanted to. "Collaboration is part of what I like about film. But when I'm painting, there's nobody in the middle. I have control over what I see," says this Director of Photography, who calls art his sanity tool.

On the set, FujiFilm's Super-F series gives him that same control. "I'm thrilled with how this film reacts under the most difficult conditions -- because I'm always in them." For the new NBC series, The Pretender, Jewett shoots in air, at sea and on land, using a variety of Fuji stocks in a variety of light conditions. Fuji always comes through. "It's rugged stuff," says Jewett. "You can beat it to death, shoot on the run and it hangs with you. You get incredible images."

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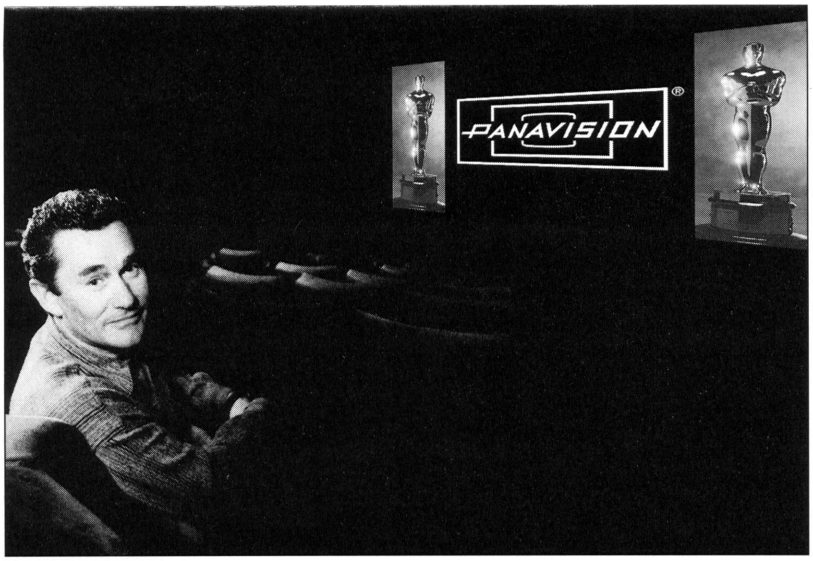


Company president John Farrand relaxes in Panavision's on-site state-of-the-art screening room in Woodland Hills.

Inside Panavision

AC takes a behind-the-scenes tour of the camera company's new state-of-the-art headquarters.

by Benjamin Bergery

Two men, one carrying a Primo lens case, pass each other in a busy corridor. As an afterthought, the first calls back, "So, if you're quitting the life, what'll you do?" Swiveling around, the other responds, "That's what I'm contemplating. First, I'm gonna deliver this case to Marsellus. Then, basically, I'm gonna walk the Earth." "What do you mean, walk the Earth?" "You know, like Caine in *Kung Fu*. Just walk from town to town, meet people, get in adventures."

Without missing a beat, Panavision's assistant camera rental manager and vice president of sales have just played out the final scene from *Pulp Fiction*. They then go on their separate ways down the halls of the camera company's new headquarters in Woodland Hills, a place that is imbued with filmmaking.

This love of the art form is apparent from the moment a visitor steps through the front door. The entrance foyer to the vast single-story facility is highlighted by a painted representation of a mirage-like image from *Lawrence of Arabia*. At every turn of the lengthy corridors, one is struck by poster-sized images of cinematographers, directors and actors plying their respective crafts on the set. Even the employee cafeteria features ironic cinematic murals: the memorable diner scene from *Five Easy Pieces*, and the hilarious fake-orgasm deli sequence from *When Harry Met Sally*.

The crescendo of cinematic images leads toward Panavision's movie theater, where customers screen film tests and employees gather regularly to see first-run features. The elegant theater has predictably superb optical quality, state-of-the-art sound (including all three digital audio formats, plus THX), and an industrial-strength popcorn machine.

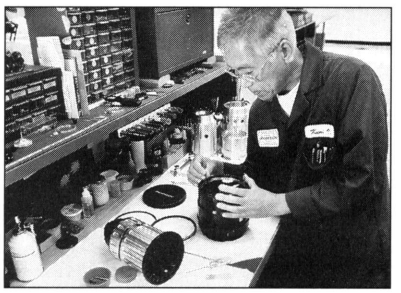
For Panavision, 1996 has been a watershed year. In June, the company moved from its traditional Tarzana headquarters to a site twice the size in nearby Woodland Hills. Five months later, the corporation went public, appearing on the New York Stock Exchange under the moniker of PVI; its stock jumped up 17% on the first day.

Renowned throughout the industry as the leading 35mm film camera and lens rental company, Panavision has a worldwide network of 30 owned and agent outlets in the United States, Europe, Asia and Australia. The company differs from other rental facilities in that it also designs and builds the equipment it rents; unlike other manufacturers, Panavision does not sell its cameras or lenses. As all film crews know, the only way to use Panavision equipment is to rent it.

But what is it that makes Panavision tick? *AC*'s readers most often learn about the company's lenses and cameras by reading interviews with cinematographers; for the purposes of this article, we decided to get the inside view by speaking with the people who work behind the scenes.

Panavision's president, John Farrand, explains the dual nature of the 40-year-old company thusly: "I see Panavision more as a rental company which manufactures its own equipment than as a manufacturer which rents. Our goal is to provide our customers with the best possible camera systems. Over the years we have found that the only way to achieve this — and to ensure a continual evolution in product development — is to control both the development and manufacturing process ourselves. A great example is the contribution Panavision has made to optical lens design: we've designed 40 new lenses in the last six years."

The approach seems to be working. Panavision's innovations in cameras and lens design over the past four decades have been rewarded with two technical Oscars, as well as a score of Academy Award plaques, all proudly dis-



Clockwise (from top far left): *Vice president of Manufacturing, Jurgen Sporn with castings destined to become new cameras; a new Primo zoom lens is assembled; director of operations Ralph Sasaki oversees the sprawling Service Department; the R&D team poses with a mysterious new studio camera that will be unveiled in the coming year; the Marketing Team poses on the Camera Floor.*

played opposite the headquarters' movie theater.

Farrand was the key designer of the new facility. "The new building is a milestone for us," he says. "It solves our space frustrations of the last few years and opens up the opportunity to achieve our hopes and aspirations for the future. We feel that we have designed our facility around the needs of camera crews, giving them the space and amenities they require. For example, we have added the capability to process negative film right here on the premises."

The president acknowledges that the past year has been difficult for both Panavision and its customers. Camera and lens shortages have plagued the industry at a time of extraordinary growth. "Our move to the new facility," he asserts, "will allow us to significantly increase the size of the R&D team in order to accelerate many of our developments. It will also enable us to double our manufacturing capacity to increase the quantity of new products that we will bring to the market."

Farrand underlines the importance of product development at Panavision. "Our approach to business is totally integrated; it starts and finishes with the end user. Our philosophy is to develop the product in partnership with our customers, and then support those products with the utmost in service, no matter where in the world the clients choose to film. The development process must begin with the requirements of our customers: camera crews, directors of photography and filmmakers. For example, the Primo zooms resulted from the frustration of the cinematographer at not being able to intercut high-quality primes with a zoom — the zoom was historically the lesser-performing product. We set about changing that, and we did."

Perhaps the most remarkable aspect of Panavision's new facility is the integration, under one roof, of the design, manufacture, servicing and rental of filmmaking tools. The heart of the building is a huge open space referred to as the Camera Floor. Here, camera assistants test equipment for features, TV shows, MOWs and commercials. In addition to two long rows of prep stalls, there are private rooms nearby for productions that require a lengthy preparation. Each prep stall or room is outfitted with a sliding test chart with lights attached; a video monitor; and a work desk with phone, fax and modem lines. There is a constant flow of equipment cases as Panavision prep technicians move to and fro, assisting working customers.

At one end of the Camera Floor, a cappuccino bar supplies complimentary gourmet coffee so that customers and Panavision staffers may re-fuel themselves throughout the day. Next to it is the Panastore, where one can buy expendables and select from an expanding line of Panavision clothing. A nearby lounge area offers camera assistants a place to sit down for meetings, make phone calls or look at videotapes. At the distant end of the Camera Floor, the rental staff works the phones and fills orders for upcoming shoots. On a busy day, the space has a buzz akin to that of a bustling film set.

Next to the Camera Floor is the Marketing Department, an area with the lively, informal feel of a production office; throughout each business day, 10 customer representatives move in what seems like perpetual motion. During a rare quiet moment, we spoke with Phil Radin, executive vice president of marketing; Larry Hezzelwood, VP of market-

Photos by Cari Pike, courtesy of Panavision

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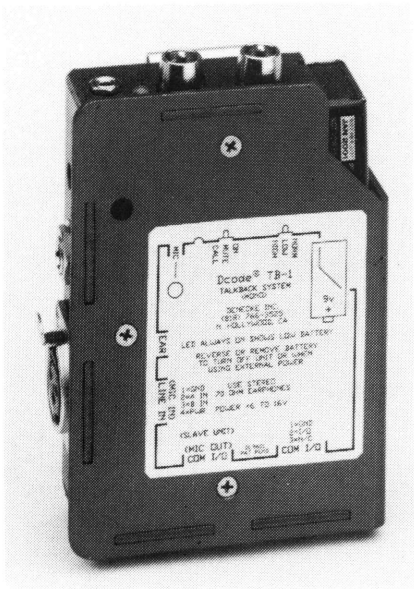

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ing and operations; and Bob Harvey, VP of sales.

Radin feels that the marketing team plays an integral part of any film production that seeks out the company's resources. "I look at this group as being almost an extension of the camera crew — not just from the viewpoint of the cameraperson or assistant, but also for the people on the production staff. I believe that producers and production managers look at us as being part of their camera team."

As Radin reminds, "The relationship side of this industry is very critical. People want to know that their supplier is looking out for them. They want to feel as if their project has this sort of 'guardian angel.' It might start out as someone in the marketing group, but the whole idea of a guardian angel flows all the way through the company. We're only as good as the support we get from all the other departments. Of course, the client doesn't care how something gets done; he or she just wants to know that it *will* get done, and that's the basis of their relationship with someone in marketing."

"Service is such a big part of what we do; it's the heart of our business," adds Hezzelwood, who draws on his previous experience as a manager of Paramount Pictures' Camera Department and as a camera assistant. "In our business, we must clearly realize how crucial every job is to our clients. They count on us. It's as if they're saying to us: 'You guys are on my side, we're in this together.' We enjoy that kind of collaboration; it's part of our role, whether the job is an episodic TV show, a sitcom, a commercial, a large feature or a low-budget independent film."

Harvey, for his part, is not concerned that Panavision's size might intimidate "up-and-coming" filmmakers. "When someone comes in here and gets overwhelmed, it's up to us to reassure them. I tell them that all of this capability and expertise is at their fingertips, and that we are their access to all of it. We're here to take care of them and to make the filmmaking process as easy as possible. If people think we're too big or unapproachable, let them know that we're waiting for their call."

Panavision's marketing outreach to up-and-comers is complemented by a dynamic educational program offering free equipment-training sessions, as well as seminars at film schools. Panavision's New Filmmaker Program even provides free camera equipment for student films. Obviously, demand greatly exceeds supply, but budding filmmakers can contact program director Kelly Simpson for guidelines.

Director of operations Ralph Sasaki oversees the areas that support the activity of the Camera Floor: Camera Rental, Service and Shipping & Receiving. Sasaki explains that he likes to keep "an open-door policy" in the Service Department. New assistants are invited in to get more familiar with the gear, while old-timers will come in to check an occasional lens in projection, or confer with a technician.

Sasaki emphasizes that "every piece of gear that comes into Panavision has to be serviced, regardless of how long it's been out. Whether the last job was a day, a week or a month, every item has to go through the normal service procedure. We have a standard checklist that every technician goes through to make sure each piece of gear works correctly." For example, each camera is taken to a sound booth to be measured, with film running through it, before it goes out. The final check occurs on the Camera Floor, where a Panavision prep technician assembles the package prior to shipment, or helps the camera assistant do so.

Sasaki adds that some service checks are so important that they are actually done by two different people to ensure that "every camera that leaves the premises has been double-checked for the most crucial items. For example, a second technician has to verify flange focal depth, collimation, shutter timing and camera sound level."

Among the important checks for lens service are T-stop and focus calibration. In addition, MTF (modulation transfer function) readings are kept on file for

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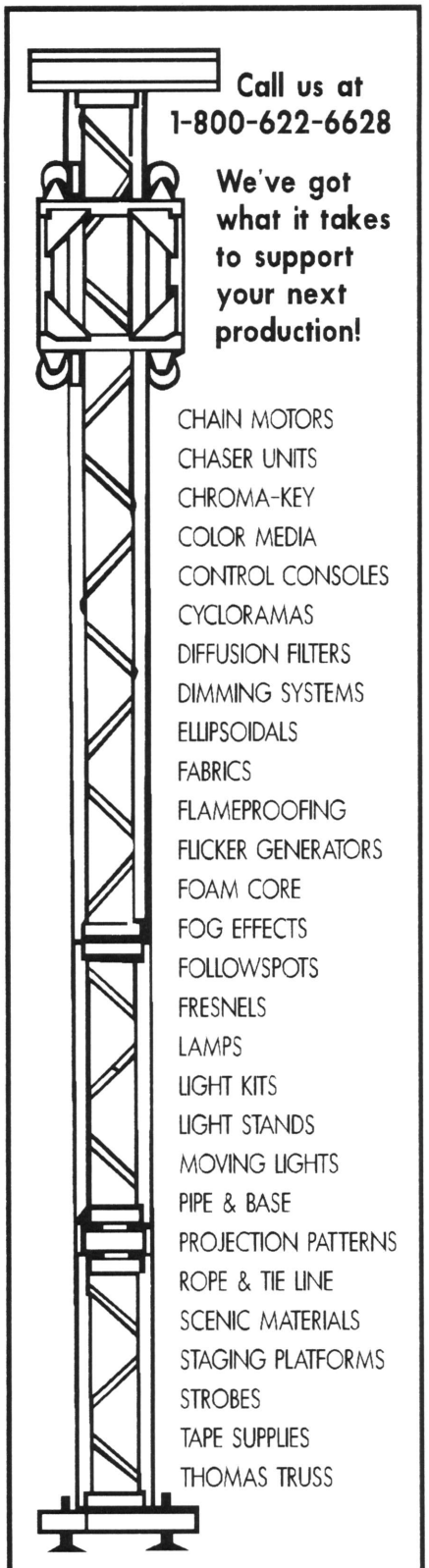
Pictured from "Dead Man's Walk" are Yves Simoneau, director, James Sprattley, 1st AC, Edward Pei, director of photography, and Lou Cicero, dolly.



every lens. Sasaki explains that anamorphic lenses require more experience to service and evaluate than spherical lenses. "You have to have a slightly better eye to identify what's good and what's bad, because you're dealing with things like color fringing and astigmatism," he notes. Ralph's son, Dan Sasaki, manages the difficult art of anamorphic servicing for the company.

Sasaki says that he has noticed a change in clientele over the years. "Every day you see someone that you haven't seen before. I used to know about 85 percent of the camera assistants in town, but now it's almost the other way around. It's exciting to see all of these new faces."

The nature of the business leads to unusual problems. Sasaki recalls cameras falling into the ocean or getting pounded by cars, tanks, airplanes, and even horses. The biggest challenge for the Service Department is responding to emergencies on the film set as quickly as possible. Electronic problems are sometimes the most difficult to pinpoint, and Sasaki stresses the fact that Panavision cameras are equipped with circuit boards that can be switched quickly in the field.

The next stop on the Panavision tour is the Manufacturing Department, whose vice president, Jurgen Sporn, offers an overview of the vast expanse of machines and workshop spaces where Panavision equipment is built and assembled. The complexity of Panavision cameras and lenses is daunting. Sporn states that there are "on the order of a thousand parts" in the camera alone. The company's manufacturing strategy is to build intricate components like the movement or viewing system separately and then integrate them into the camera. Specialized technicians create the movement, viewfinder, electronics, accessories, and magazines that make up the final camera system. The final assembly of all of the Primo prime and zoom lenses is handled by trained "lens makers."

In addition to a conventional machine shop, Panavision has 10 gargantuan CNC (Computerized and Numerical Control) machines. These robotic devices enable programmed machining of schematics emanating from the Engineering Department down the hall. After engineers devise a camera body on a CAD (computer-aided design) system, this digital blueprint is then fed into the CNC machine, which creates the actual camera housing from a metal casting.

Despite the efficiency and sophistication of the CNC machining process, Sporn avers that "Panavision parts are very labor-intensive." Camera and optical systems are high-precision items, and many of the tolerances are microscopic, requiring human crafting and control. Each camera movement, for example, is assembled by a single person who must create "a perfect fit" from a hundred minute metal parts. This painstaking work involves precision on the order of $1/10{,}000$ of an inch. Similarly, Panavision lens makers are responsible for the ultra-precision assembly of the lens housing, and the extreme accuracy of the zoom, focus and T-stop mechanisms.

Sporn notes that 99% of all final assemblies are completed at Panavision. Some accessories, such as tripods, are assembled outside the company's walls, but any piece of mechanized or electronic equipment is assembled on-site. "However," Sporn adds, "we do not polish or grind optical glass, so we go to outside sources for that."

One place visitors don't usually see at Panavision is the closed-off section that houses the Engineering, Research & Development and Optics activities. Tak Miyagishima, senior VP of engineering, is Panavision's elder statesman. When he began working for the company back in 1955, he was only its eighth employee. His subsequent career as an engineer has mirrored Panavision's growth; he recalls working on anamorphic projection lenses, then 65mm projects, and finally 35mm cameras and optics. Miyagishima has a disarmingly simple view of the changes that have taken place the company over the past 40 years. "The enthusiasm is still here," he muses. "In essence, it's

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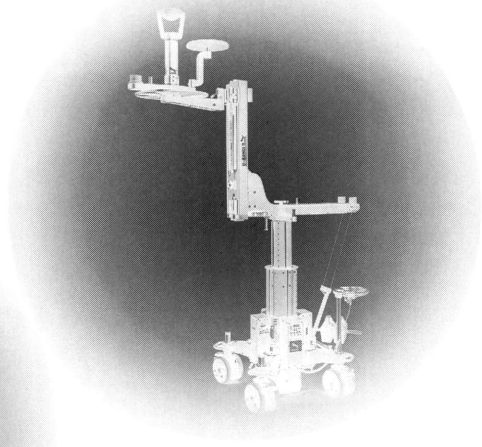

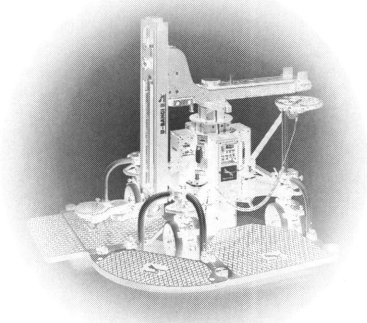

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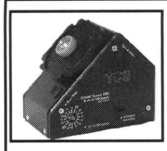

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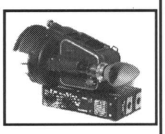

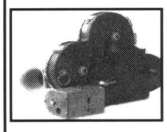

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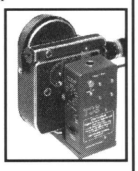

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just been an evolution."

Panavision's product design team is a powerful mixture of tradition and the addition of young talent such as electronic director Brian Dang, and R&D project director Nolan Murdock. Murdock expresses admiration for his more experienced colleagues, including Miyagishima, Al Mayer (VP of R&D) and Al Saiki (VP of engineering). "Tak Miyagishima is probably the foremost authority there is on anamorphic and other formats," Murdock says. "Al Mayer designed and managed the production of the first Panaflex cameras, as well as the 16mm and the studio 65 cameras, and he's been the [key overseer] of the cameras' mechanical systems ever since. He's got 30 years of experience with Panavision, and more with Mitchell Cameras before that. Al Saiki is a mechanical genius; among other things, he designed the first camera Panavision ever built — the PSR — as well as the Panahead and the mechanics of the first Primo zoom."

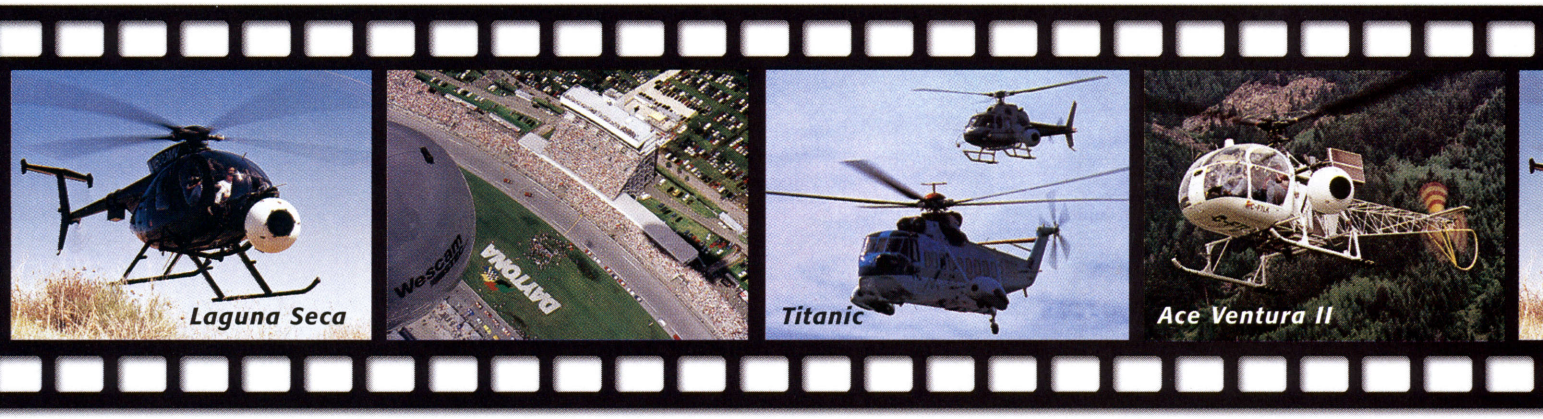
Naturally, the R&D and Engineering teams were reluctant to discuss the specifics of ongoing projects. They would admit, however, to putting the finishing touches on a new Panavision 35mm studio camera which will be introduced in the coming year.

The company's other departments are also headed up by experts. Iain Neil, senior VP of optics, holds some 100 optical patents, and is one of the principal architects of Panavision's celebrated Primo lenses. In a lilting Scottish accent, he explains the economics behind Panavision's decision to make lenses in-house. Noting that optical manufacture involves "very high cost and long lead times," Neil states that "Panavision's rental economics enable us to design very good — and therefore expensive — products that are proprietary as a long-term investment, whereas lens manufacturers have to make more inexpensive products that may have lower performance to satisfy their sales margins."

As a lens designer, Neil's job is to "interpret the requests that come from customers — what a cinematographer describes may be difficult to put into mathematical terms." Neil notes that the design philosophy behind Panavision's Primos was "to maximize contrast and sharpness. You can't boost the contrast of a lens that doesn't have it to begin with, but you can always start with a high-performance lens and then degrade or manipulate its performance to get a specific look. For example, you can lower the contrast [via special techniques involving] lighting, filtration or film stock." Neil explains that Panavision lenses are designed and assembled in-house, while "the glass elements are ground by an optical division of Hughes Aircraft Corporation, according to our specifications."

The Optics Department has an MTF (modulation transfer function) bench that enables objective measurement of contrast and focus of lenses at any distance up to its length of 60 feet. This computerized system is used to calibrate each individual focus mark on every new lens. Optics is also involved in servicing lenses. Neil relates, "We work from the conception of an optical product — whether it be zooms, primes, video optics or viewfinders — to its completion. As people start to use the new product, we take charge of servicing until we feel that we've ironed out all the details." Without being specific, Neil indicated that Panavision is presently developing "some new zooms and more specialty lenses."

As we concluded our tour of Panavision's new facility, President John Farrand articulated the future of the company. "We will be introducing a series of new cameras and optical products over the next couple of years," he announced. "We will also pay significant attention to remedying equipment shortages. Now that Panavision has gone public, we are in a position to take advantage of many new opportunities. Whatever the technology or medium of choice is in the future, rest assured that Panavision will be there striving to provide the very finest in equipment and services." ◆



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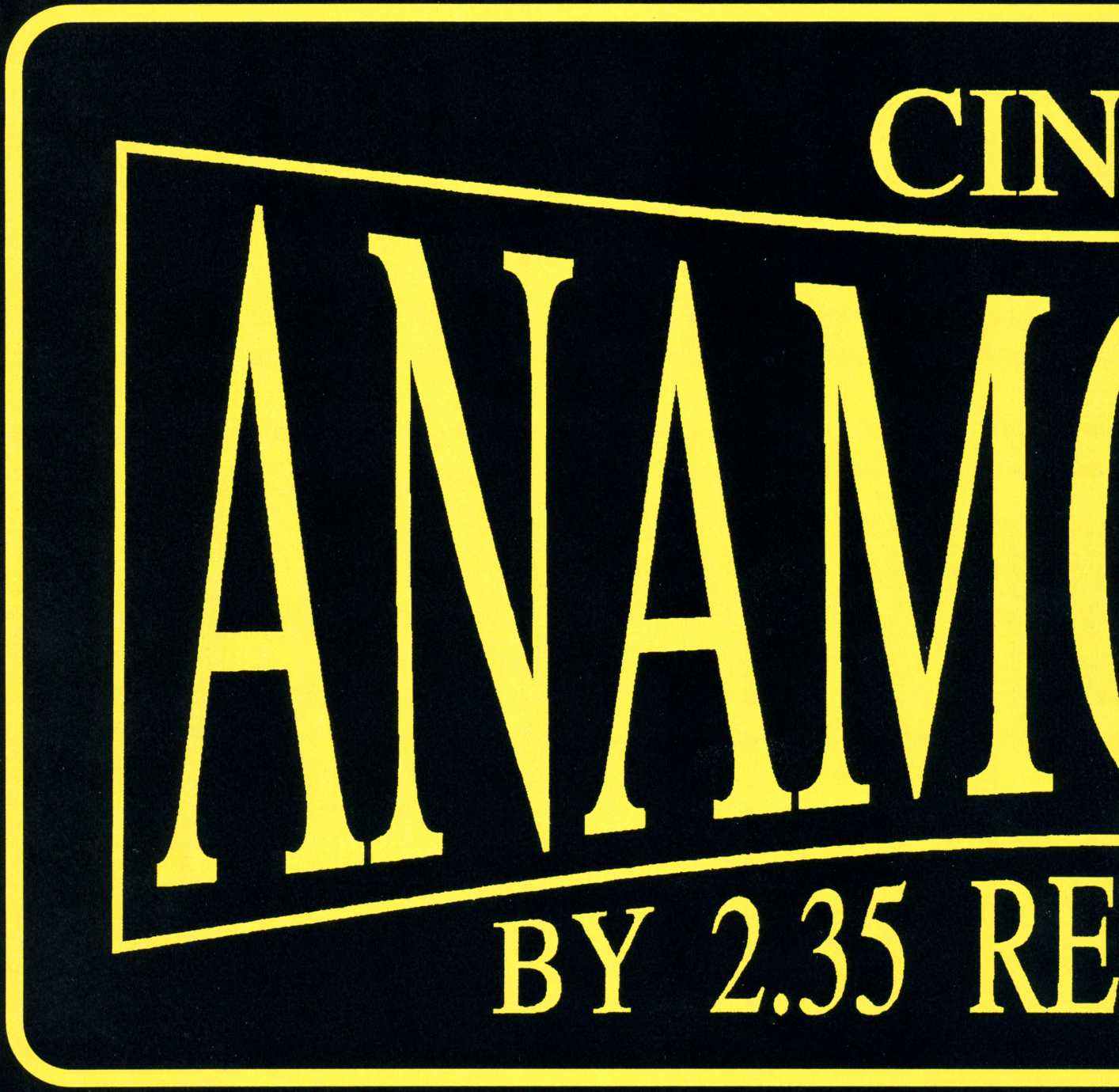

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Chasing Greatness

The ASC fetes Owen Roizman for his diverse career of groundbreaking work with the 1997 Lifetime Achievement Award.

by David E. Williams

Focus and determination are two key traits that propel artists beyond obstacles and into the realm of excellence. They are also qualities that Owen Roizman, ASC has demonstrated time and again over the course of his career. In recognition of the cinematographer's skill behind the camera, the American Society of Cinematographers has selected him to receive its 1997 Lifetime Achievement Award.

Roizman is the ninth recipient of the honor, following in the footsteps of ASC greats Gordon Willis, Conrad Hall, Haskell Wexler, Phil Lathrop, Stanley Cortez, Charles Lang Jr., Joseph Biroc, George Folsey and Sven Nykvist. The presentation will take place during the organization's 11th annual awards celebration, to be held at the Century Plaza Hotel on February 23.

The honor came as a complete surprise to Roizman, even though he has served as an ASC vice president, board member and Awards Committee co-chairman (and has since been elected ASC President). "I got all choked up," the veteran cameraman confesses, recalling the moment he heard the news. "I called my wife Mona to tell her, and I could hardly get the words out. It's a great feeling to be honored by your peers for the body of your work."

Roizman's work has earned him numerous honors, including five Academy Award nominations for his work on the films *The French Connection* (1971), *The Exorcist* (1973), *Network* (1976), *Tootsie* (1982) and *Wyatt Earp* (1994). The latter film was also nominated for a 1995 ASC Award. But the cinematographer offers that the ASC Lifetime Achievement Award is perhaps the most heartfelt accolade a member of his profession can receive.

Presenting the award will be writer/director Lawrence Kasdan, with whom Roizman has collaborated on four films: *I Love You to Death*, *Grand Canyon*, *Wyatt Earp* and *French Kiss*.

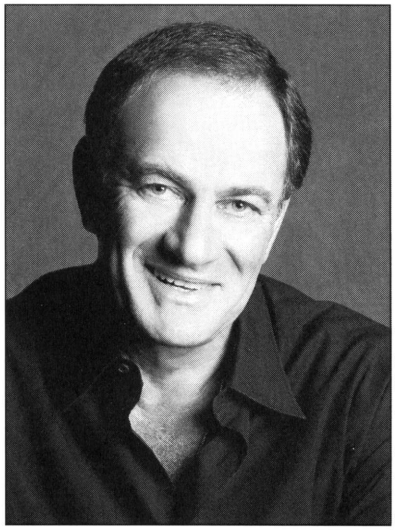


Photo by Douglas Kirkland.

The cinematographer's other feature credits include *Stop!* (unreleased), *The Gang That Couldn't Shoot Straight*, *Play It Again, Sam*; *The Heartbreak Kid*, *The Taking of Pelham One Two Three*, *The Stepford Wives*, *Three Days of the Condor*, *The Return of a Man Called Horse*, *Independence*, *Straight Time*, *Sgt. Pepper's Lonely Hearts Club Band*, *The Electric Horseman*, *The Black Marble*, *True Confessions*, *Absence of Malice*, *Taps*, *Vision Quest*, *Havana* and *The Addams Family*.

A perennial winner of the annual ASC Golf Classic, Roizman's pursuit of personal excellence began during his youth while growing up in Brooklyn, New York. "I loved baseball and was fortunate that I was a gifted athlete," the cameraman says, recalling his days as an all-scholastic player in high school. But Roizman also performed despite the effects of polio, which first affected him at the age of 13 and ultimately cut short his promising sports career. While that dream ended, Roizman's desire to excel did not, but it took some time before he found a new purpose. In hindsight, however, his calling was seemingly under his nose all the while.

For 22 years, Sol Roizman, a father of four, served as a cameraman for Fox Movietone News. And while this must have seemed an exciting profession to some, it didn't have much impact on his young son Owen. "I never paid attention to what my father did because I was in my own world — I ate, slept and breathed sports," Roizman admits. "To me, my father was someone who did dangerous work. I remember him telling us about the death-defying acts he would do just to get some shots — like walking along the reconstruction framework at the top of St. Patrick's cathedral in New York City.

"He was always traveling or getting called off suddenly, and during the war, he got a lot of calls to shoot newsreels. So he missed a lot of events in our lives as we grew up. That was something I tried to relate to and draw upon when dealing with my own son as he was growing up, because I had to be away so often."

Roizman's own interest in photography at the time began and ended with "taking a few snapshots, or occasionally shooting

some home movies."

Later, while attending Pennsylvania's Gettysburg College, Roizman studied physics and math, "strictly because I was good analytically. I thought I could be a math teacher, a physicist or even an engineer. I interviewed with various firms that came to look at my graduating class. I was dismayed by the salary offers and the thought of being a nine-to-five guy. I knew then that I wasn't that type. I needed something more exciting, more stimulating and more versatile. I didn't consciously realize it at the time, but my creative juices were already beginning to flow."

Roizman did have hands-on camera experience, having worked during the summers for an equipment rental company in New York. "The owner did my dad a favor by giving me a job. I learned how to set cameras up, take them apart and thread them. I learned what an assistant cameraperson did and I got to know the equipment. Becoming an assistant sounded like a better opportunity — and at least a little looser.

"But my father was against the idea. He was worried for me, and didn't want me go into this difficult business."

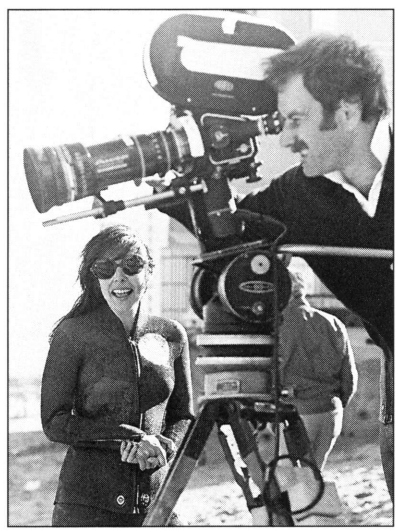
Fortunately, the elder Roizman was able to help his son get into the union. "He had gotten me in while I was still in college, just as a failsafe," the cinematographer recalls with a smile. "He was instrumental in getting me freelance work on commercials."

A turning point for Roizman came soon after, when he apprenticed with a Hungarian cameraman named Akos Farkos. "Akos was a good friend of my father's and a wonderful guy. He took me under his wing as his assistant."

A year later, Gerald Hirschfeld, ASC needed a new assistant. "Gerry was part owner of MPO Videotronics, which was the largest commercial house in the business, and he was a renowned cinematographer," Roizman says. At the suggestion of Sol Roizman, Hirschfeld brought Owen in on a trial basis. He soon earned a position as the cinematographer's staff assistant. The elder Roizman frequently worked as Hirschfeld's operator, and the connection between father and son grew. "It's hard to define the relationship my father and I had," Roizman offers. "He was very supportive and proud of me throughout my athletic period, and equally supportive but nervous for me as I took on this new challenge.

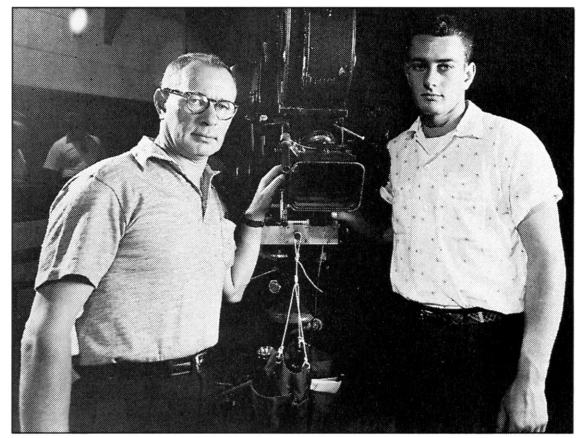
"At a certain time in life, father-son relationships can be difficult — then all of a sudden they become great," Roizman reflects. "My son Eric recently graduated from the UCLA film school and was one of my assistants on *Wyatt Earp*. We have an absolutely wonderful relationship — which grows on a daily basis."

Roizman's career advanced another step in 1962 when he assisted Hirschfeld on the feature *Fail Safe*, directed by Sidney Lumet. "This was a major Hollywood-type feature, and I was nervous as hell," he recalls. "Here was a major star, Henry Fonda, and a great director, Sidney Lumet. That experience really taught me the difference between feature and commercial work. "



Meanwhile, Roizman's family was struck by tragedy when his 21-year-old brother Jay died in a car accident. "It destroyed my father," he recalls. "He died of a heart attack just three months later, and it was very tough for all of us."

Roizman continued to focus on his career, and soon began to work with future ASC peer Gordon Willis, who became Hirschfeld's new camera operator. "Gordon and I had previously met and become friends while working together as camera assistants at MPO. We worked as a team for about a year, but then Gordy wanted to go out on his own and shoot," Roizman says. Hirschfeld needed a new operator, and Roizman got the job. His friend Enrique Bravo became the new assistant, and would later operate on many of Roizman's feature films.



Above: *Sol Roizman with Owen in 1958 on the younger man's first day of work as a camera assistant. The two frequently worked together on commercials. The experience drew the father and son closer together "partially because we could talk about the business and I could pick his brain."*
Left: *Roizman lines up a shot for the comedy* The Heartbreak Kid *(1972), directed by Elaine May (in background). He took the film because "Neil Simon's script was extremely funny."*

Asked at what point he began to consider cinematography to be more than a job, Roizman replies, "My ambition grew slowly. I had no idea — *none* — that I would go where I actually did. At first I never thought about becoming a 'great cinematographer.' The ambition increased when I became an operator. I realized that I *could* shoot, that I liked what I was doing, and that I could be good at it."

This growing passion was a familiar feeling for Roizman. "Any time I have gone into anything, I have had a competitive urge to be the best that I could be," he explains. "When I became an operator, and cinematography became my primary interest in life, I started to appreciate how difficult the craft was. I also learned what to look for: movement, light, composition. Strangely enough, I became fascinated with performances as well."

Asked to appraise his apprenticeship as an assistant and operator, Roizman compares his experience to the film school background that many cinematographers now have. "You can come out of film school having done a little assistant work, some operating or gaffing, and go out an get

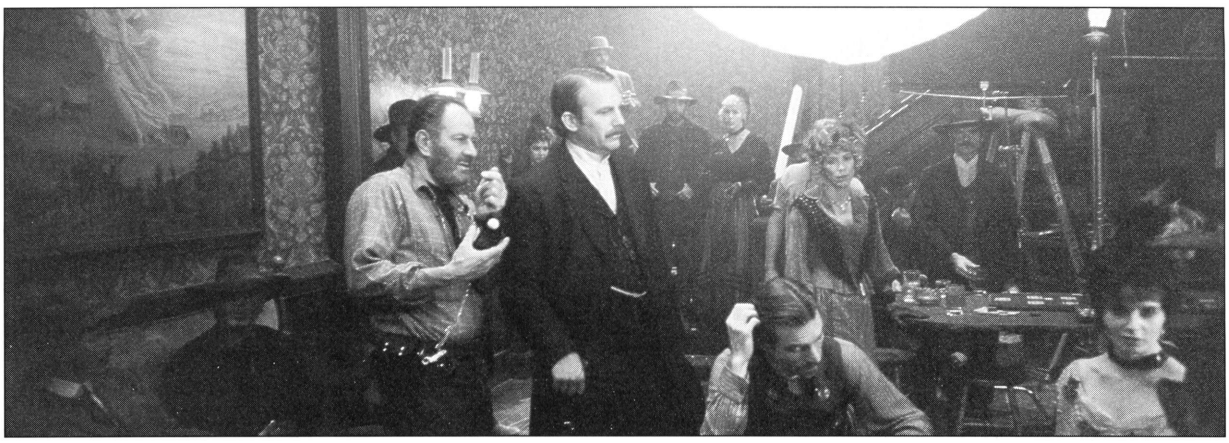


Photo by Richard Fezzey.

Right: ***Roizman checks his lighting on actor Kevin Costner while shooting*** **Wyatt Earp** ***(1984). The cameraman devised a lighting approach that stayed true to the era's sources, such as candles and kerosene lamps.***
Opposite, top: ***Roizman with actress Faye Dunaway while shooting*** **Network** ***(1976). He recalls, "*****Network*** ***was the best script I ever read, and it was a chance to work with [director] Sidney Lumet. I would have done anything to shoot that picture."***
Opposite, bottom: ***Roizman and director William Friedkin compose a shot of actor Jason Miller for*** **The Exorcist** ***(1974). The cameraman reserves special praise for Miller, noting, "I've been lucky to work with exceptional people like Jason, as well as Gene Hackman and Roy Scheider on*** **The French Connection."**

experience doing music videos and commercials. Students today learn more about filmmaking at a younger age. When you go through the system as I did, you learn about the mechanical parts first, but I wouldn't trade my training for anything. When I set up a shot, I know what it takes to make that shot. I can pull the focus on a shot, operate a shot myself, and light it. However, knowing that can also sometimes be a hindrance to your creativity, because you might think, 'Maybe we shouldn't do it this way, because I know how tough it's going to be.' You might censor yourself."

Roizman points out, however, that he "didn't get to study other people's work the way it can be done now. We had to go to the movies and sit though the whole thing just to see a particular shot. So there was a lot more trial and error. I never really went to the movies to study other people's work, although there were films that left an impression on me, such as *In Cold Blood* [shot by Conrad Hall, ASC]. I was shooting by then, and as a cinematographer I could recognize that it was a great piece of visual work."

In 1970, Roizman was hoping to get his first feature film, and narrowly lost the director of photography position on *End of the Road* to his friend Gordon Willis. "When Gordon's career was starting to flourish," he says, "all I could think was, 'God, how can I get off the ground?'"

Roizman's first break came on "an extremely low-budget picture" called *Stop!*, which was shot on location in Puerto Rico. He had been recommended for the job by Dick DiBona, who was the head of General Camera Corporation of America. Roizman recalls, "The director didn't know much about cinematography and just left everything up to me, so I had a field day and it looked really good. But the story didn't quite make it and the picture was never released."

At about the same time, director William Friedkin was looking for someone to shoot *The French Connection* (see *AC* Feb. 1972), and Roizman was again recommended by DiBona. "Friedkin had seen my commercial reel and his attitude was, 'Well, what can he do with a feature?'" Roizman says. "He arranged a screening of *Stop!*, and said, 'Look, that stuff was beautiful, but the picture I want to shoot is gritty, dingy, and almost documentary in style. Can you do that?' Of course, I wanted the job and was ready to say anything. So I said, 'Sure, why not? I'm a cinematographer. You tell me what mood you want and I should be able to achieve it.' Billy liked my attitude and offered me the job."

Roizman had seen Friedkin's previous pictures, *The Boys in the Band* and *The Night They Raided Minski's*, and was impressed with his directorial style. But what was more interesting to the cameraman was *The French Connection*'s script, by Ernest Tidyman. "It was truly great," he says. "Over the years, there have been only a handful of scripts that even came close to striking me the way that one did."

Asked to describe how a script affects his cinematographic approach, Roizman explains, "I'm very objective. I look at a script and say, 'Okay, what's the mood of this story and how can I bring that to the screen?' Breaking it into scenes, I ask, 'How can I make this feel as if it's real, as if it is actually happening?' I take this approach because I remember that feeling as one of the things that impressed me as a film*goer*. I never thought of a camera being there, I never thought of lights — and whenever anything drew my attention to the fact there was a light or a camera, it *distracted* me. I remember that when I saw *The Battle of Algiers* I had to remind myself that it wasn't a documentary. That was how I wanted to shoot my pictures.

"The *French Connection* script dictated a certain realistic quality," he adds. "When I read it, I pictured walking through New York in the middle of winter following somebody in the streets. I imagined the coolness in the air, the darkness, and the danger that lurks over New York at night. I developed a visual look based on that and decided to make everything appear as if it had been done with available light.' People would later ask if in fact I really had shot everything with available light and I would say, 'Yeah, everything that was available *from the truck*.'

"At night, in the bars and streets, we used a lot of small fixtures — Photofloods and gimmick lights — in places that audiences weren't aware of. For example, with streetlights, we would hang a light above the actual fixture just to amplify the existing lamp, so the light would look like as if it were coming from the same place. You can make shots like that a little easier now because of the faster

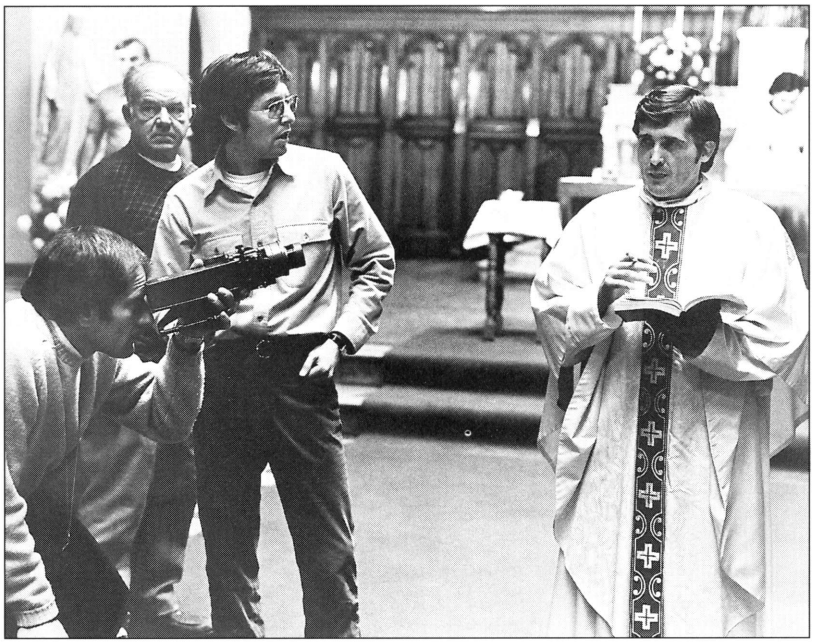
films. We were using Eastman Kodak 5254, which was 100 ASA. I underexposed it, force-developed it, printed it up and did everything I could to get every inch out of the film.

"We used old Cooke and Baltar lenses that were f2.3, whereas nowadays you can get lenses down to an f1 or 1.4. We *had* to light. I have some stills from *The French Connection* where you can see lights hanging everywhere — you wouldn't believe how many."

After spending a decade working on glossy commercials, Roizman viewed *The French Connection* as a welcome change of pace. He elaborates, "We didn't have any female stars in the picture, so the women could look real — like who they were supposed to be. And the men were not supposed to be glamorous in any way. In fact, the more rugged they looked the better it was for their characters. Besides being talented, Gene Hackman and Roy Scheider are two fabulous guys to work with. I was able to light scenes strictly for the mood. That's a breath of fresh air for *any* director of photography."

Roizman's approach to the picture involved a great deal of experimentation. Many of the locations that were used, such as subway stations and dingy bars, were lit with fluorescents, which he hadn't really used before. "I didn't know anything about them, because we never used fluorescents on commercials," he says. "I would sometimes see the dailies and think, 'Nothing matches — why did that happen?' But as I made my mistakes, I learned how to correct them."

Despite his feelings of success upon finishing the film, Roizman still had little idea of what he had accomplished. In essence, he had laid down the foundation for a signature style that he would modify and refine throughout his career. But at the time, he hadn't realized that he even *had*



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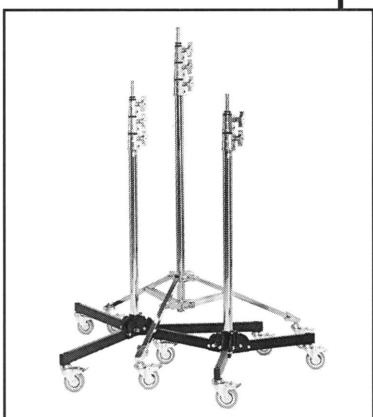

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his own style. The cameraman explains, "Just before *The French Connection* came out, I went to see *The Conformist*, which Vittorio Storaro [ASC, AIC] had shot. I remember sitting there with my wife and seeing this film that was totally different stylistically from what I had just done. And the cinematography blew me away. At the end of the picture, I turned to Mona and said to her, 'I've got to try even harder if I want to do that kind of work someday.'

"Then *The French Connection* came out and I was nominated for an Academy Award. I only realized then that that film was done in a style I had set for myself. I had to totally change everything I'd ever learned in order to shoot *The French Connection*, which resulted in a style that was appropriate for that picture — 'gritty New York street photography,' which I was then typecast by some people as doing. But every film is unique and demands a different approach, and *The Conformist* helped me become aware of other styles and how beautiful cinematography can be, depending on the material."

After completing *The French Connection*, Roizman dove directly into a trio of comedies, including director Herbert Ross' *Play It Again, Sam*, based on the play by Woody Allen. The lighting itself is often instilled with humor, particularly as the film's antihero protagonist, a daydreaming movie critic played by Allen, is visited by the spirit of Humphrey Bogart — who offers advice on "dames." Says the cinematographer, "There are a lot of fantasy situations in that film, and rather than being clichéd and putting diffusion on the lens or flaring things out, I tried to suggest those moments with a change of lighting. In the film's real-world situations, I tried to keep the lighting as realistic and natural as possible. Then, whenever Bogart appeared, I tried to give it that mysterious, dramatic, *Casablanca* quality."

Indeed, the spectral Bogart is magically illuminated in a noirish toplight, appearing to be almost monochromatic in otherwise color-filled settings. At the end of the film, Allen's character finds himself assuming Bogart's role in *Casablanca*, bidding farewell to the woman he loves at a fog-shrouded airport. Similarly, Roizman tried to emulate the techniques that cinematographer Arthur Edeson, ASC had used while shooting the 1942 classic. As the cameraman admits, however, "I never really re-created the look he had in *Casablanca* because I tried to do it with soft light. I was so into soft light at the time that I didn't study the original scene enough to realize that I couldn't get the nuances of that kind of hard lighting with soft sources."

"I had to totally change everything I'd ever learned in order to shoot *The French Connection*."

Roizman resumed his collaboration with Friedkin on *The Exorcist* (see *AC* Feb. 1974). The cinematographer was first introduced to the source material while he was still shooting *Play It Again, Sam* in San Francisco. "I would come home after working long days," he recalls, "and my wife would be reading this book. I asked her what it was about and she said, 'This young girl has been possessed by the devil and two priests are going to exorcise her.' I had no desire to read it because I don't like that kind of material and didn't believe in that kind of stuff.

"After I finished *Sam*, Billy called and said, 'I've got a great story for us to do, *The Exorcist*.' He's a great storyteller, and he described the story in such a way that I said, 'That sounds great!' Billy did such a good job of brainwashing me that I read the book right away and loved it.

"I always like to research a picture as much as possible," he notes. "If it's comedy, of course, there's not much to research. But on a picture like *The Exorcist*, it helped to know that there had been actual cases [of demonic possession]. It also helped to experience the fright that I felt when I read about all of these odd things that supposedly really did occur."

This connection to the real world played directly into Roizman's style. The cameraman relates, "Billy said he didn't want it to look like one of those old Hollywood horror films. He felt it would be best to have the story in a realistic setting, so that the audience would think that these horrible events could actually happen. I agreed; if we avoided any fancy lighting or funny stuff, then the audience might really *believe*. So that's what I went for."

The Exorcist contains many indelible images, including the starkly sinister nighttime shot of Father Merrin (Max Von Sydow) arriving to perform the exorcism. As he stands outside the victim's house with a dense fog swirling around him, a strange shaft of light falls upon his silhouetted figure, emanating from the second-floor window of the possessed girl's bedroom. The image was so powerful that it was selected as the film's poster art.

"Billy insisted that the shade on the window be pulled down. I said to him, 'Well, if it's an opaque shade, how are we going to get a shaft of light out of it?' He replied that basically that was my problem. We wound up building a platform behind the window frame, and we put an arc light on it. We then backed the shade away from the window about six feet and lit it separately. By putting the arc between the shade and the window frame, I could get a clean shaft of light that looked as if it was coming from the shade — although it was actually coming from between the shade and the frame.

"The shaft didn't quite hit Von Sydow, so I had another light put down in the street directly behind his final position and aimed right at the camera — it's actually in the frame. As he stepped into position, we brought it up on a dimmer. That created the aura, or halo, around him. When we did the rehearsal, which is when they shot the still used in the poster, our artificial fog was thick and sitting just right so you couldn't see the second light until we dimmed it up. But by the time we did the take, the wind had come up and

blown much of the fog out and you *could* physically see it — stand and all.

"When we saw the dailies, there was the light — a 2K *in the frame* — before we brought it up on the dimmer. But nobody except Dick Quinlan, my gaffer, and I ever noticed it, and we never said a word about it."

Roizman states that there was a certain creative chemistry in his relationship with Friedkin that produced good work on both their parts. "I always felt that I contributed a tremendous amount to the two pictures we did together. I'd make comments and suggestions on just about anything. And he made major contributions to what I was doing — by encouraging me and pushing me to do even better."

The cinematographer has enjoyed successful collaborations with many other directors as well, which undoubtedly has been a factor in the consistent quality of his work. "The director/cinematographer relationship is somewhat akin to a marriage," he opines. "Some directors might not want me as a husband or a wife, but there is a lot of give and take. To work with someone more than once, there has to be a friendship. I have worked with Ulu Grosbard a couple of times; I love him, we get along great. Harold Becker and I did three pictures, and we became great friends. Sydney Pollack and I have done five pictures together, and I have done four with Lawrence Kasdan.

"But when I was working with these directors, we still had to maintain those relationships on a daily basis. Sometimes we'd have disagreements and need to work them out, but we always had the best interests of the picture at heart."

Roizman returned to his gritty New York style for *The Taking of Pelham One Two Three*, a heist film that featured the hijacking of a subway car. "*Pelham* had a realistic scariness to it," he says, "and one of the ways to get that scariness was to create a mood that was real. So that is the approach that I took in doing it."

The cinematographer used the anamorphic 2.35:1 format to capture the film's tunnels and

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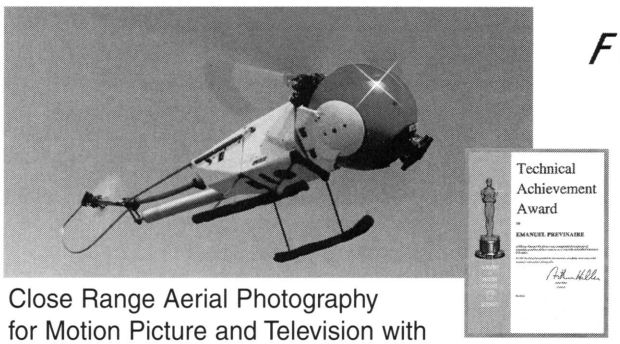

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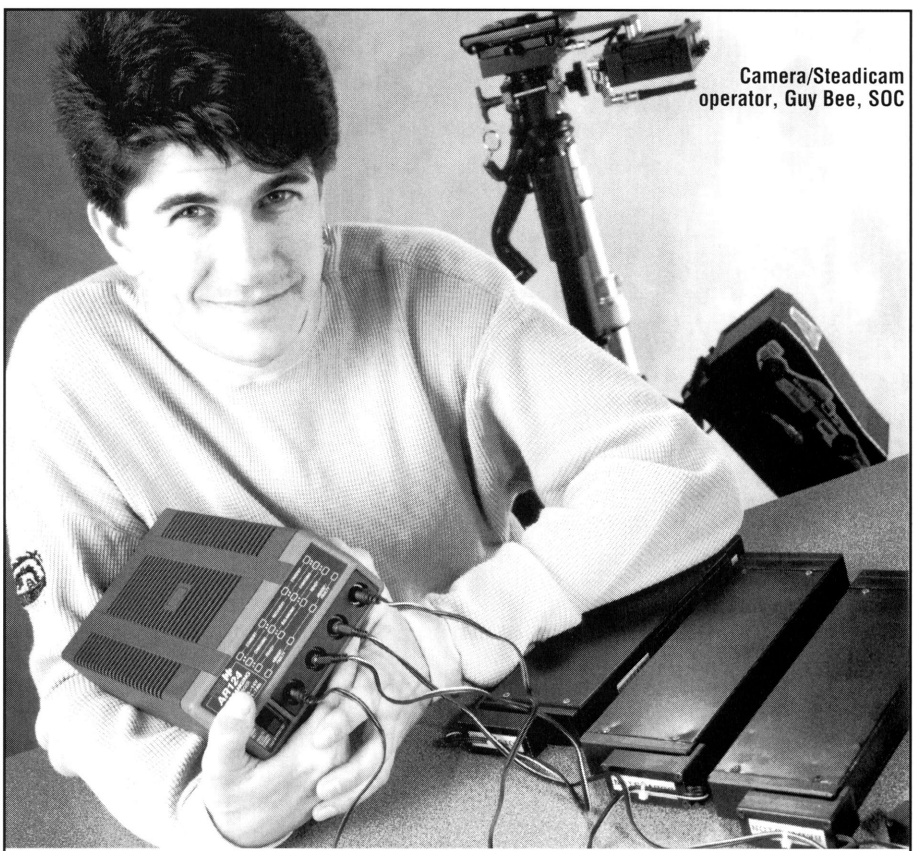

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cramped train interiors, but that choice compelled him to become even more inventive with his lighting, since the widescreen frame left little room for sources. "A couple of students once asked me how I lit the tunnels on *Pelham*. Basically, I changed out all of the bulbs in the tunnels to Photofloods. Using those, I had enough ambient light to get some exposure. Whenever I had a subject, we would just fill it in with the slightest bit of light, maybe three to five footcandles, so it looked real as hell.

"We pre-flashed the negative, which gave me more detail in the shadows. I also force-developed it, as I had done on *The French Connection*, but I didn't underexpose it. I exposed it normally according to the force-development. On *The French Connection*, I had force-developed the film and underexposed it, so we had to print on very low lights, which gave it kind of a grainy, muddy look.

"Between *French Connection* and *Pelham* I had learned how to get a bit slicker when I wanted to, but I still operated from the same questions: 'What is the situation?' 'Where is the light coming from?' 'How can I recreate that look?' I'm an amateur magician, and there's nothing I like better than fooling somebody. So I always took that approach to my work. One of the biggest compliments I can get is somebody asking, 'How did you do that?' It's like they're watching a good magic trick."

Asking questions of his peers and offering his own answers is another way Roizman has bettered his craft. "There are plenty of people whose brains I have wanted to pick," he says. "Connie Hall and I joke about the time when he was in New York shooting *Marathon Man* and I was about to go off and do *Return of a Man Called Horse* — which turned out to be a great experience and I think one of the prettiest films I ever shot. I had never done a Western before, and I wanted to pick Connie's brain about doing day-for-night work. So we went out for dinner and talked through the night. He has always teased me about it. In fact, after he saw *Grand Canyon* [*AC* Nov. 1991], Connie called me up and said, 'You sure have come a long way since that night we had dinner.'"

Pausing, Roizman offers, "You can ask somebody how they did something, but it comes down to one word: taste. I think those who have good taste are the ones who are successful. With people who don't have good taste, it doesn't matter how much they know if they don't have the taste to know when it's right. There are some wonderful young talents coming up now whose work I really admire. I would find it interesting to observe them at work and see what techniques they use to achieve those memorable images."

"You can ask somebody how they did something, but it comes down to one word: taste."

In the mid-Seventies, Roizman was on a creative roll, but he still approached his work with care. "I'd sometimes wonder if I would be able to get the kind of look I wanted, and what would be required to do it.

"When I did *Three Days of the Condor*, I had no idea if I was doing a good job or not. It wasn't until the picture came out and people said, 'That was great work you did on that picture' that I knew — and to this day people think that it's one of my best jobs. But I'll look at and find all kinds of flaws. I also look at *Condor* and love how some things came out so well. So, as with most artists, my career has been a constant self-evaluation."

Still, Roizman did feel that he was becoming more proficient in his work. "*Network* [*AC* April 1977] does not have the gritty look of *The French Connection*, although I still tried to be realistic," he notes. "Again, we were working with extremely low light levels. The reason on *Network* was that we shot most of the film in an actual Manhattan high-rise office building, in order to use the real skyline in the background instead of Trans-Lights. We were often shooting at night, through tinted windows, out onto buildings that were not lit. I had to balance the light in the room to be able to register those backgrounds on film. To get the exposure we needed, I had to use very low light levels — often with 25-watt bulbs as key lights — and work wide open."

Even while dealing with such a seemingly hostile location, Roizman says that he works "mostly on instinct. It's very hard for me sometimes to project how I think a scene should be lit before I see it rehearsed and staged. I have always thought of myself as a mood-maker. I try to feel the mood of a scene, a set, and a film, and then try to create that mood on film. I like to subconsciously transport the audience into the film so that they're unaware of the camera and the lights and they're actually part of the scene."

Roizman and Sydney Pollack collaborated closely on *Tootsie*, the story of an out-of-work actor (Dustin Hoffman) who becomes an overnight sensation by dressing in drag and becoming an *actress*. Asked to outline his approach to comedy, Roizman offers, "You know the old cliché that comedy is a little brighter? I tried not to think that way early on in my career, but the bottom line is that comedy is very different than drama.

"In drama you have to be more concerned about the faces and the lines. In comedy, aside from the jokes, you have to be concerned with body language and sometimes facial expressions to emphasize a joke. Those to me are more important than brightness or darkness.

"I've always thought of myself as having a pretty good sense of humor; I like to tease people and keep a light atmosphere whenever I can. I might be inclined to *think* funnier while working on a comedy, but not necessarily, because basically it's still a job. I'm there to see what's happening and to record it on film in the best way possible. It's not my own humor or dramatic qualities that are going to enhance the story."

Roizman's willingness to

experiment surfaced once again in the 1940s-era mystery *True Confessions*. The cinematographer abandoned his usual research, a move inspired by director Ulu Grosbard. Says Roizman, "I asked him how he envisioned the look of the film and he said, 'As if it had been shot in 1949 but using modern techniques. I don't want to use sepia, diffusion or anything else.'

"After Ulu said that, I thought I would desaturate the color a little in the final print. I felt it would make the picture look as if it had faded over the years. I didn't use sepia, diffusion or special filters. I just shot it as I would shoot a picture today. When it came time to make the final print, I inquired about different methods for the desaturation process. However, when I showed an almost-complete answer print to Ulu, he said, 'Why fool around with it? I love it the way it is.'

"I have to give credit to the production designer, the late Steve Grimes, who did a great job. We had previously worked together on *Straight Time, Three Days of the Condor, Independence* and *The Electric Horseman,* and on *True Confessions* Steve had created such an effective palette in the design of the film that after we shot it we didn't have to do anything to change it."

Wyatt Earp [*AC* June 1994] offered Roizman not only the opportunity to work with Kasdan again, but the chance to indulge his penchant for shooting outdoors. "Shooting big exteriors is both fun and difficult," he says, recalling the 113-day long *Earp* production, which filmed primarily near Santa Fe, New Mexico. "That was a really tough film to do, yet I can't remember too many pictures where I had as good a time. The weather was brutal, but there was something about the chemistry of everybody involved that made it fun to work on.

"Before I did *Wyatt Earp,* I researched the hell out of Western style. I don't know if I watched every Western that was ever made, but I sure saw a lot of them! I wasn't going to try to do it better than anything else; I just wanted to do it my own way."

In 1975, Roizman was invited to join the American Society of Cinematographers, making him one of the organization's youngest active members at that point. Says Roizman, who was recommended for membership by Stanley Cortez, ASC, "When you see those letters after your name, they denote prestige. You obviously have to have some credentials to get them, and that reflects on all of the great cinematographers who have been members of the organization.

"I think the ASC represents a goal to aspiring cinematographers; someday they can be where we are, learn what we've learned and do what we have done. In my case, the ASC has offered to me a sense of friendship and camaraderie among my peers that I don't think I could have found anyplace else."

This experience has helped teach Roizman "that we are all different. As with any art form, some people will like what you do and others won't. It took me a long time to settle into that idea and not try to be like somebody else, or to be as good or better than somebody else.

"Take Vittorio Storaro, for instance; I love his work, and I think he's a great human being. But if Vittorio had shot *The French Connection,* he might not have gone as gritty as I did.

"Likewise, I don't think many guys would have shot *The Godfather* the way Gordon Willis did. He came up with a style, and it had an incredibly individual look that people have tried to copy for years. If anybody else had shot *The Godfather,* it might have had a different impact.

"I feel that way about a lot of my fellow cinematographers. We are all individuals and we all do things our own way; we don't have to be better than the next guy, we just have to be ourselves. That's the attitude I take: I just want to be myself. I'm going to do things that some people like and others don't like. It makes me feel good if other cinematographers tell me that they love my work, but, of course, that kind of compliment just reflects the taste of that particular individual." ◆

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If you want to bring George Lucas to his knees, just ask him where you might plug in your tape recorder. Seconds after I broach the question, the Jedi Master is scurrying about his richly appointed office at Skywalker Ranch, pulling up bits of carpeting to locate an elusive outlet. "Hmm," Lucas mutters, gazing hopelessly into a subterranean tangle of wires. "So that's what's under there!"

The comic irony is obvious: Lucas, the technological wizard, is momentarily thwarted by the most common of technical requests. We eventually sit down at a wicker table nestled into a bay window (with plenty of outlets) overlooking the Ranch's verdant lawn and nearby postproduction facility.

As down-to-earth as Lucas seems, his achievements are anything but earthbound. At 52, he is arguably the most important film innovator working today. Certainly, others are more prolific; Lucas has directed just three feature films — *THX-1138* (1971), *American Graffiti* (1973) and *Star Wars* (1977). Some filmmakers may have deeper artistic insight, while still others may be more deft with cinematic techniques. But no one has pushed the technology of filmmaking with his tenacity, vision and ultimate success.

Perhaps that's because Lucas, more than any other filmmaker today, loathes making movies the old-fashioned way. In countless interviews he has used grim imagery — war, handcuffs, pain — to describe the hell of creating studio films. All of this can be traced to Lucas' deep-rooted fear of compromise, and of losing creative control.

It's a fear common to directors, but while Lucas' position may not be unique, his reaction is. Director Matthew Robbins, a longtime friend and occasional creative associate (*Dragonslayer*), believes that Lucas' dislike of production and love of editing inexorably, if not deliberately, evolved his effects powerhouse, Industrial Light & Magic, into a facility capable of constructing cinematic characters and environments during postproduction. The results of this process, as evidenced in the TV series *The Young Indiana Jones Chronicles* and the feature *Radioland Murders*, can be visually stellar, but the impact has yet to be fully felt. Be forewarned: as the manipulation of each image becomes *de rigueur*, Lucas foresees an imminent demand for digital cinematography.

While preparing for his fourth directorial outing on the first of the new *Star Wars* films,

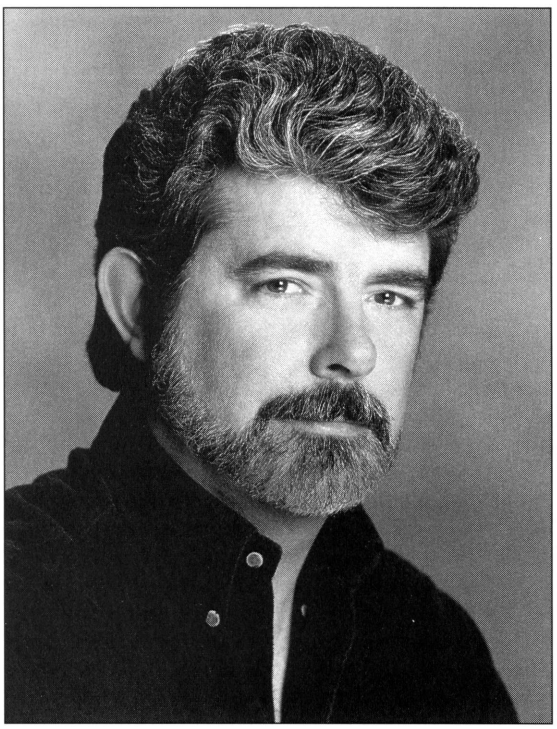

Photo by Greg Gorman, courtesy of Lucasfilm Ltd.

Lucas shared his thoughts on the current state of the art and what lies ahead.

***AC:* After you finished *Star Wars*, you established the Lucasfilm computer graphics division. Did you conceive then that filmmaking could be where it is today, with virtually anything possible in post?**

George Lucas: No. I put together the computer division in 1978 or '79 to develop a non-linear editing system, a laser printer, and a more efficient rendering technology. We were able to do all of that, which allowed us to actually begin using computers to do 3-D animation, rather than just wireframes, which was the level of the technology then. We were trying to develop an efficient system for getting the images in and out of the digital domain, as well as technology to manipulate the images once we got them into the digital domain, and a post system that would allow us to edit everything together and tell the story. We were basically trying to digitize the entire process, and that's where we are today.

In the back of your mind, did you ever think you'd be using computer graphics to create whole environments and characters?

Lucas: I don't know that I had a complete idea of the level at which things would shift. You take one step at a time. I knew that the editing process and the post process were very antiquated and cumbersome, and that doing it electronically was much easier.

Of course, digital effects technology can be very cumbersome as well. When did the technology become streamlined enough for you to see that the future of filmmaking was ultimately digital?

Lucas: When I went into the [*Young Indiana Jones*] TV series. On the [feature] film end, it just cost so much to do everything, because film has about seven times more resolution [than video], which brings it up to roughly 10 times the cost. But on the TV series, I was able to work in a much lower-res medium; we were able to move things around much more quickly and cheaply, so I could use [digital techniques] more often. I said, 'I want to be able to do a couple hundred shots in every hour-long episode and still have a budget that's under $50,000.' I wanted to be able to play with this stuff and see how it worked. In the end, we made 22 'feature films' in the space of five

years, and we experimented with all kinds of things. Some things worked, some didn't. We learned a lot in the process, and that's what I'm using now. The TV show was really a testbed for the *Star Wars* Special Edition.

At the same time, with ILM we were pushing digital animation, which really reached its culmination with *Jurassic Park*. That was when we sort of jumped the fence and said, 'My God, we can do this.' And since then, the issue of digital animation and creating characters and being able to manipulate and move things has completely changed the way we think about film. It's just a completely different medium than it was before, and that's very liberating; it's a better, more efficient way of using the resources.

So now your technological revolution has made the prospect of directing attractive to you again.

Lucas: Yes. One of the things that disturbed me before in directing was the level of compromise you had to cope with to get what you wanted. I guess that's the impetus for me going back and finally fixing the original *Star Wars* films. Twenty years later, I'm still bugged by the things I couldn't do or couldn't get right, and now I can fix them. I was able to go through and do things I wanted to do back then, but wasn't able to because of time, money and technology. Smoothing them over and making them more effective, more of what I originally envisioned, has been a very satisfying experience; another reason I've done it is that I knew I wouldn't have to put up with the same level of compromise that I did before. That's bothered me to this day, but now I can go through and enhance everything to a level that I just couldn't achieve before. Now it's all just part of the post process.

It's remarkable that your love of editing and your longtime commitment to computer technology have begun to streamline filmmaking, and all of its separate tools, into one tool.

Lucas: Even though I started out mostly in photography, editing has been my life. Over the years, I've torn many sprockets; chipped my nails trying to peel Scotch tape off of film; and spent hours looking for a trim I knew was at the bottom of the bin. But eventually I got tired of wasting time; I wanted to be able to cut to the chase much quicker. I wanted to be able to manipulate things endlessly without having to say, 'I'd like to make this change, but God, what a mess it's going to make, so let's just forget it and leave it the way it is.' I hated that kind of compromise. I was always very frustrated that I couldn't deal with the ideas, see what I was doing and then make a creative decision, rather than just moving on. There was so much stuff in between — like keeping everything in sync, which to me was like clerical work. So I had a big impetus to [develop] a non-linear editing and integrated post system, which we're just starting to get to with the new Avid Droid and the new Audiovision combo. We'll end up with complete digital post, which is where we need to be.

Film used to be the stringing together of images — photographs — and editing was just rearranging the photographs on a board. But non-linear editing to me also means non-sequential filmmaking, and I'm very *pro* on that issue. When I started out, I thought I was going to end up being a *cinema verité* cameraman and an editor. I was used to going out and shooting a lot of material, coming back into the editing room and then figuring out what I was going to do with it, working within the constraints that I had. When I went out to shoot, I knew had to capture as many moments as I possibly could, and then turn them into a film that worked by using whatever stylistic devices I could. I think everybody struggles with what happens when they actually get into [the editing room] and try to make a movie out of what they've shot.

Before, once you photographed something, you were pretty much stuck with it. Now, it's more like painting. You can have complete control over it just like an artist does, and that to me is the way it should be. It's so much more liberating in terms of changing things in the frame. It's not just moving frames around; you can actually change each frame to give it more unity, more clarity, and more symmetry.

According to your producer, Rick McCallum, you feel that as long as you're going to digitally manipulate the images, you may as well shoot them on digital tape. But some of our greatest cinematographers argue that using anything less than film will result in a tremendous loss of image quality.

George Lucas: Past, Present and Future

Filmdom's most famed forward-thinker reveals how his hands-on experiences with the cinematic medium inspired him to change the way motion pictures are — and will be — created.

by Ron Magid

Lucas: When you talk to musicians and they say, 'Well, I don't like to record digitally because it doesn't have that warmth, it's a little harder edged,' it's exactly — *exactly* — the same argument that cinematographers use. They are correct: it *is* a different look, and it *does* have different qualities, [but] that doesn't make it bad; it just basically makes it different. And eventually, *eventually*, you will be able to make [the two methods look] the same. We're not there yet, but this is all in its infancy.

It's the same issue as when movies went from black-and-white to color. I grew up under the tutelage of Haskell Wexler [ASC], one of the premier black-and-white cinematographers. And I was around when he was the last guy shooting black-and-white films. Today, we all bemoan the fact that black-and-white films have gone out of vogue; we all love black-and-white films, and we wish there were more of them. It's a medium that has an honesty unto itself. But the issue of black-and-white versus color is the same thing as film versus digital. Haskell and a lot of other cinematographers didn't throw away the logic of black-and-white films; they brought those principles into the color era. The artistic principles that were developed during that period are as important today as they ever were, even if you're shooting in color. It's just that people have a tendency to throw that stuff away, and I don't think they should.

It's going to be the same thing with digital. It has a lot of advantages, and a different quality in terms of the way it looks, but as digital gets further along the line — and these are very controversial issues for a lot of people — you can ultimately manipulate an image to a much more sophisticated degree and get that film quality. That's what we're working on: software programs to use after we've shot digitally, which will create a quality that will match that of film. I'm just worried about matching in with the other *Star Wars* movies. I happen to be very liberal about imaging, and I don't have a strong bias for one type of look over another. To me, it's all very interesting and it's all very valid in its own right. I don't think one should take over from the other; I think we should actually keep them all. I think eventually you will be creating black-and-white looks, color looks and the new digital look. But it will all be done digitally.

So you feel that the art of cinematography won't be diminished just because the technology is changing.

Lucas: I like to think of the cinematographer as an artist, not as a technician. I am very much for the art of cinematography, but I don't worry about the technology, because the technology changes all the time. I deal with this in film schools. They say, 'Well, we need more 16mm cameras, the kids want to work on 16.' And I say, 'Why do you need film cameras at all? Give 'em Hi-8 cameras and let 'em learn that it's not how you operate the camera that's important, it's how you decide what the lighting is,

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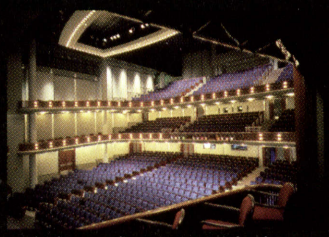

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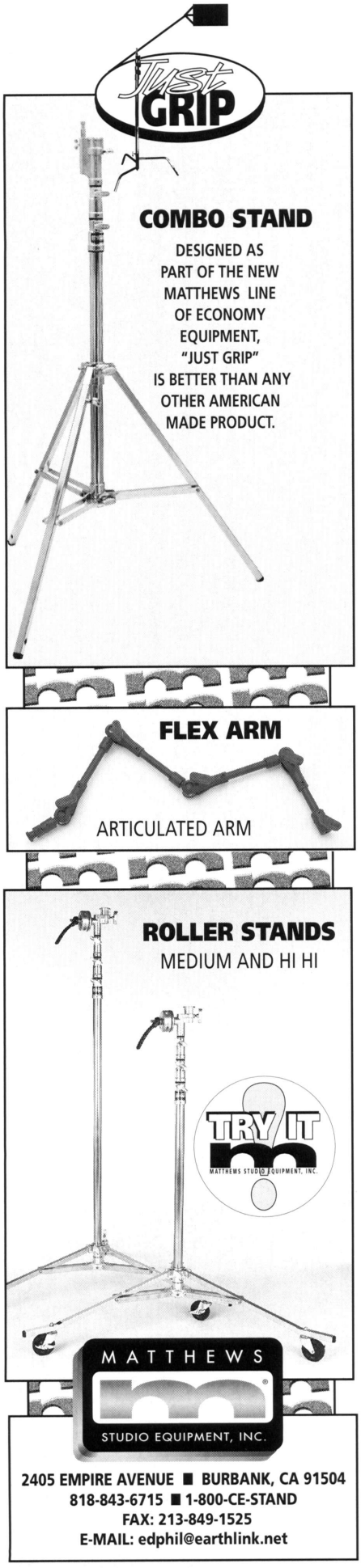

what the images and the graphics are, and how they move in the frame.' Those are the things that are important — not whether you can figure out what your f-stop is supposed to be. You *can* figure that out — that's the math and the technology — but the f-stop and the lens ratio and everything shift from year to year depending on what aspect ratio you're using, what kind of cameras you're using, and what kinds of mediums you're using. What you really want to focus on is the artistry — the thinking behind all of that — and not the craft, which is 'I can keep this in focus,' because ultimately, digital focusing is going to reach a point where it's invincible. But that doesn't mean that the art of cinematography is going to go away. There is more to it than keeping things in focus.

> "Before, once you photographed something, you were pretty much stuck with it. Now, it's more like painting. You can have complete control over it just like an artist does, and that to me is the way it should be."

Having been a cinematographer yourself, you know that directors of photography pride themselves on getting the images in-camera on the day of the shoot. Certainly that will change with the advent of digital cinematography.

Lucas: I think cinematographers would love to have ultimate control over the lighting; they'd like to be able to say, 'Okay, I want the sun to stop right there on the horizon and stay there for about six hours, and I want all of these clouds to go away.' Everybody wants that kind of control over the image and the storytelling process. Digital technology is just the ultimate version of that. All I've been doing is pursuing what, I think, is the desire of a lot of the creative artists and craftsmen in the business: to be able to manipulate and control what's going on in front of them without this kind of randomness that they have to put up with.

So now you plan to go out, film the shots the best way you can...

Lucas: And fix them. I like to let the real world invade my creation. When you're trying to do it exactly like the storyboards, you're always fighting Mother Nature to get what you want, it costs a huge amount of money, and it's very difficult. This way, you can make shots conform to your idea after the fact, rather than trying to conform the world to what your idea is. It allows this serendipity to enter the picture, and gives you this whole other thing you can feed off that you don't have when you're trying to make films in a more pristine state.

You *can* make each shot look exactly like the storyboards — or, if something else happens that's even better, you can change your idea and do that. That just wasn't possible before. The advantages of digital technology and digital imaging are awesome, and I think that what you really need to concentrate on, in the end, is what appears on the screen before the audience. It's not just an image, it's a succession of images. How do those images fit together? How do the graphics and the lighting and all those things help to tell a story? That's what the cinematographer is very involved in, and it's extremely important.

Change is inevitable, and to try to stop change is a very painful experience that you can't win. Film is a very unique thing, but it is going to go out of use. And you have to accept the fact that this change is going to happen.

Rick McCallum says you would like to shoot the next *Star Wars* film digitally.

Lucas: Well, that's what we're exploring right now. If it wasn't going to be a widescreen picture, it definitely would be digital. But we're not there yet [in terms of shooting digital for widescreen]. I think we'll be there in the next

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18 months, but that'll be too late for this one.

Do you feel that this new technology will ultimately enable you to approach making a movie the way you would write a script, where you can rewrite it or remake it as you go?

Lucas: To me, a script is a kind of vague blueprint that you use to capture a lot of material, and where you really write the script is in the editing process. And that's always been reasonably inflexible. I mean, what you've got, you've got; there's nothing you can do. I know every editorial trick you can possibly imagine, but it's still extremely limited. But now, it's not. Now, you're free. I've pushed the technology to make all of this happen from the point of view of an editor, and we're now in the world of what I call "3-D editing." You can move things around in the frame, and you can change whatever you want.

I guess I'm doing the same kinds of things I was interested in when I was doing non-linear filmmaking: exploring the medium. It's just that now I'm exploring it in a very different way than I was in the past, and in a different way than I thought I would do things. Now I'm exploring the medium with digital characters and digital sets and wilder kinds of realistic scenes; it's no longer just the simple issue of cutting and juxtaposing images with various sounds and that sort of thing. But you know, my heart is still in that area — the pure cinema side of it — and that's why I look at all this as an exploration of the manipulation of images to have emotional effects. I can separate that from the storytelling part. The medium of film — how it works and how it flows together in a particular way to create certain impressions — is what I'm really interested in, and the more flexible that is, the happier I am.

Ever since you made *Star Wars*, you've been saying that you want to go back and make more personal, smaller movies. Instead, you became heavily involved with the *Star Wars* trilogy, producing films, developing technologies, this Ranch, and so many other things. Have you had a chance to work toward any of those non-linear, experimental movies that you wanted to do?

Lucas: No. The road of life leads you into many strange places, and it doesn't always go where you want to go or think you're going to go. I mean, I've enjoyed the trip. I never in a million years would have thought that I would be where I am today, knowing what I am today. I'm enjoying it, obviously, or I wouldn't be doing it, and I will get back to doing those [experimental] movies. That's my lifelong ambition. My feelings about them have changed a little bit. MTV videos have sort of moved into that area of non-linear, non-story, non-character filmmaking. Some of it is pretty crude, but I'm very interested in how it evolves. I probably won't get to it for another five or six years, anyway. But it's funny: for somebody who started out as a very non-linear, non-character, non-story filmmaker, I've become this epitome of storytelling. You know, for somebody who hated writing scripts, I've basically become a script-writer, because that's mostly what I do now.

It's happened organically. I've gotten to the place I am because I love making movies. My fascination with the medium and my interest in the medium has driven everything. I love to work with it and explore the possibilities, and then tell stories in different ways. In order to control the creative vision, to advance the art and make it easier for me to make movies, I've ended up doing all of these other things.

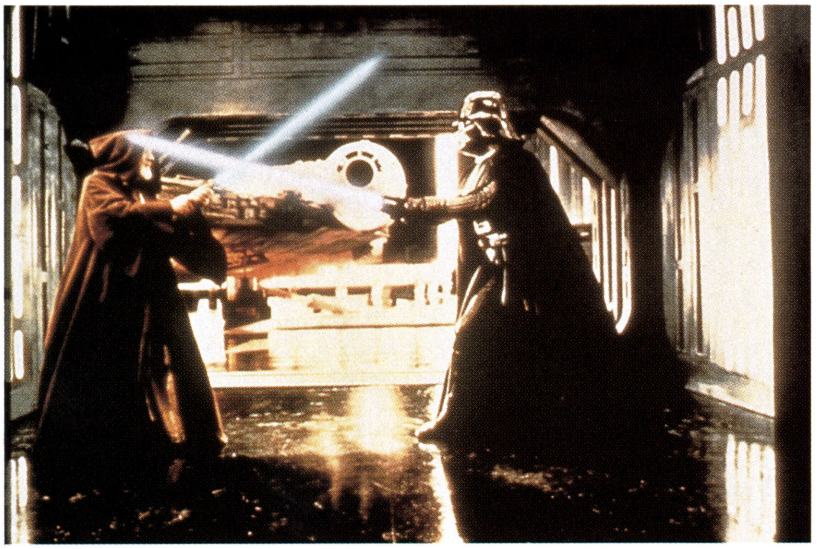
You know, the one thing my father always wanted me to do was to go into business. He ran a stationary store, and when he retired, he wanted me to take over. And I said, 'Dad, there's one thing I know I'll never do. I'll never be the head of a large company!'

So the moral is, never say never! ◆

Saving the *Star Wars* Saga

A team of determined craftsmen restore luster to the science-fiction classic.

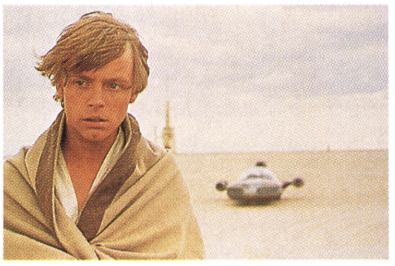
by Ron Magid



It's somewhat surprising that George Lucas, a champion of film preservation, would discover that his own masterwork, *Star Wars*, was desperately in need of restoration. Before he could even begin his work on the Special Edition, the 1977 film had to be brought up to current visual standards.

"When I saw the first print struck off the original negative, it was gone," sighs Rick McCallum, who produced Lucas' *Young Indiana Jones* series, moved on to the *Star Wars* Special Edition Trilogy and will soon graduate to producing the long-awaited prequels. "I'll have been restoring the film for three years by the time it comes out, and that film is only 20 years old! We weren't sure we could make it in time."

The Special Edition's visual effects producer, Tom Kennedy (*Radioland Murders*), blames the disastrous state of *Star Wars*' negative on the "roller coaster" created by the overwhelming success of the film, which caught the studio unprepared. "They made far too many release prints off the original neg," Kennedy says. "After 20th Century Fox reprinted *Star Wars* from the negative, we saw all the various levels of quality we could get out of the original cut, and we discovered some interesting and frightening things. It was put together very quickly, in the heat of the moment to get more shots in, so they used four different stocks, which is unusual. In addition to the original Kodak 5243, 5247 and 5253 negatives, there was also CRI, a unique color reversal stock. If George had wanted to do something even more creative to an optical shot, like flop it or add an overriding zoom, and there wasn't a lot of time, they used CRI as an intermediate reversal stock to alter those few effects shots after the fact."



Fortunately, Fox's head of postproduction, Ted Gagliano, made the restoration of *Star Wars* a personal labor of love, working closely with YCM Labs, Pacific Title, Lucasfilm editorial, ILM and Skywalker Sound. Had the negative been constructed more conventionally, the first order of business would have been to wash it in a sulfer bath at 104°F, then wipe it down by hand. But those four different film stocks couldn't be washed together; instead, they had to be separated and washed in batches. That meant dissecting the original *Star Wars* negative, washing it, and then reassembling it. "That made everybody suck in their breath," Kennedy says, recalling the stressful situation. "Thank-

Sci-fi icons. **Clockwise from top: *Obi-Wan Kenobi (Alec Guinness) and Darth Vader (David Prowse) duel aboard the Death Star; Chewbacca (Peter Mayhew) and Han Solo (Harrison Ford) blast their way out of a jam; C-3PO (Anthony Daniels), Luke Skywalker (Mark Hamill) and Kenobi receive a plea from Princess Leia (Carrie Fisher); Luke considers his destiny on the desert planet of Tatooine.***

Photos courtesy of Lucasfilm Ltd. and 20th Century Fox.

Above: ***To Reconstruct the Death Star trench sequence, seemingly identical background plates had to be sorted through to find the correct elements.*** **Right:** ***The Millennium Falcon departs. To locate a starfield element, the desired constellation was traced onto an animation cel. Archival elements were then inspected until the right pattern was found.***

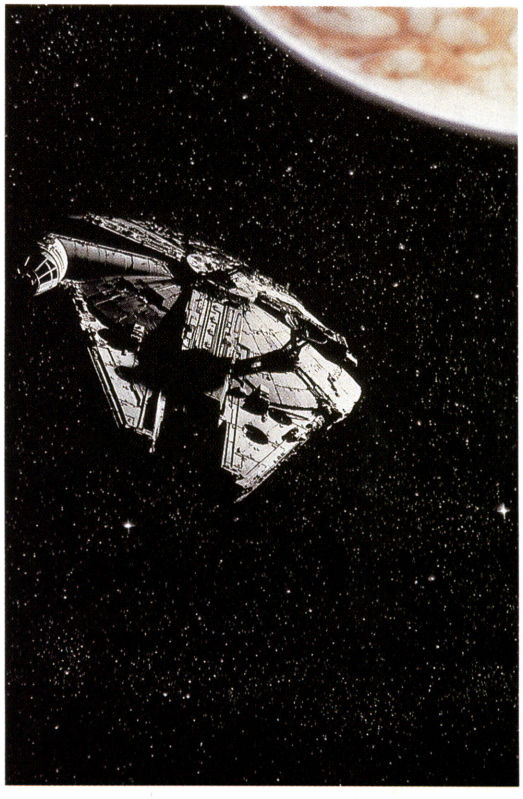
fully, Robert Hart, the neg cutter on the second and third films, came in to put the negative back together. After doing various tests, we found out right away that nothing beats scanning original negative. *Star Wars* was an A-B neg cut, which meant that they could actually lift and slug original negative and send it back to ILM whenever we were enhancing a live-action shot. I think this is the first time someone has tried to bring a Seventies effects film back to the big screen."

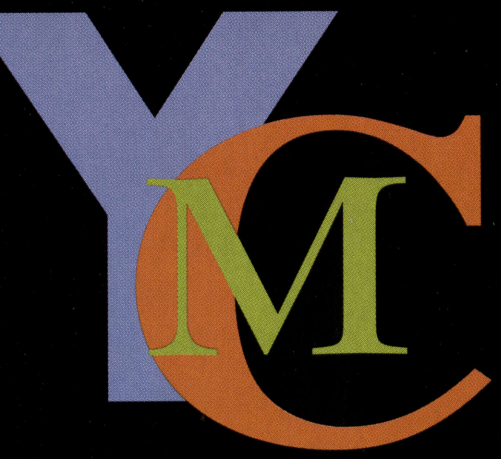
Sadly, after 17 years, the CRI material had lost so much dye that every shot realized on that reversal stock had to be removed and recomposited from scratch in order to bring *Star Wars* back to its original glory. Soon, Kennedy had *Star Wars* Special Edition film editor Tom Christopher (at Skywalker Ranch) and visual effects editor Dave Tanaka (at ILM) searching to come up with the original effects elements so that these shots, as well as other less-than-perfect opticals, could be recomposited digitally.

Remarkably, George Lucas had saved all of those bits and pieces — all the editors had to do was find them. Despite Lucas' painstaking archiving of everything connected to his work, much of the original negatives, as well as the other film elements and background plates, were nearly impossible to find because they'd been misfiled over the years. "Since Lucasfilm has branched out into so many venues, a lot of original footage has been reused for other purposes," Tanaka explains. "Over the course of 20 years, a lot of those boxes and binders have been moved from one place to the next, so if a page was missing from the original *Star Wars* editorial archives, we had to be a bit creative in finding things. A lot of the original effects shots we were redoing or adding to were found at ILM, but most of the original live-action footage — which was never intended to be used for special effects plates, but which we're also now manipulating — was found at the Ranch, because that's where the live-action cutting room was located."

Besides tracking down all the elements needed for the shots that ILM was recompositing and adding to, Tanaka's other responsibility was to re-create the editorial environment that had been established when *Star Wars'* footage was first assembled. Once that system was again in place, Tanaka could then "get into that mindset" while employing today's visual effects editing techniques to make the original elements fit together and time out perfectly. "Unlike live-action picture editing, which involves cutting shots together one after another, visual effects editing means placing several layers of film strips on top of each other to make one shot," Tanaka explains. "The visual effects editor traditionally decides when spaceships enter frame, and when explosions are supposed to happen. But since we were replacing original shots from *Star Wars* with new effects shots, our job was also to ensure that we didn't disrupt the original editing of each sequence. Although George wanted all of the spaceships to be more dynamic and to move twice as fast and double the distance, he also insisted that the new shots be the same length as the old ones. That was a challenge."

While many of the shots in the climactic space battle over the Death Star involved new CG X-wing, Y-wing and TIE fighters, most of the backgrounds were re-created using original elements, which were among the most difficult pieces of film to find. "Part of my job was to be an investigator and solve the mystery of where the pieces go had gone," Tanaka re-





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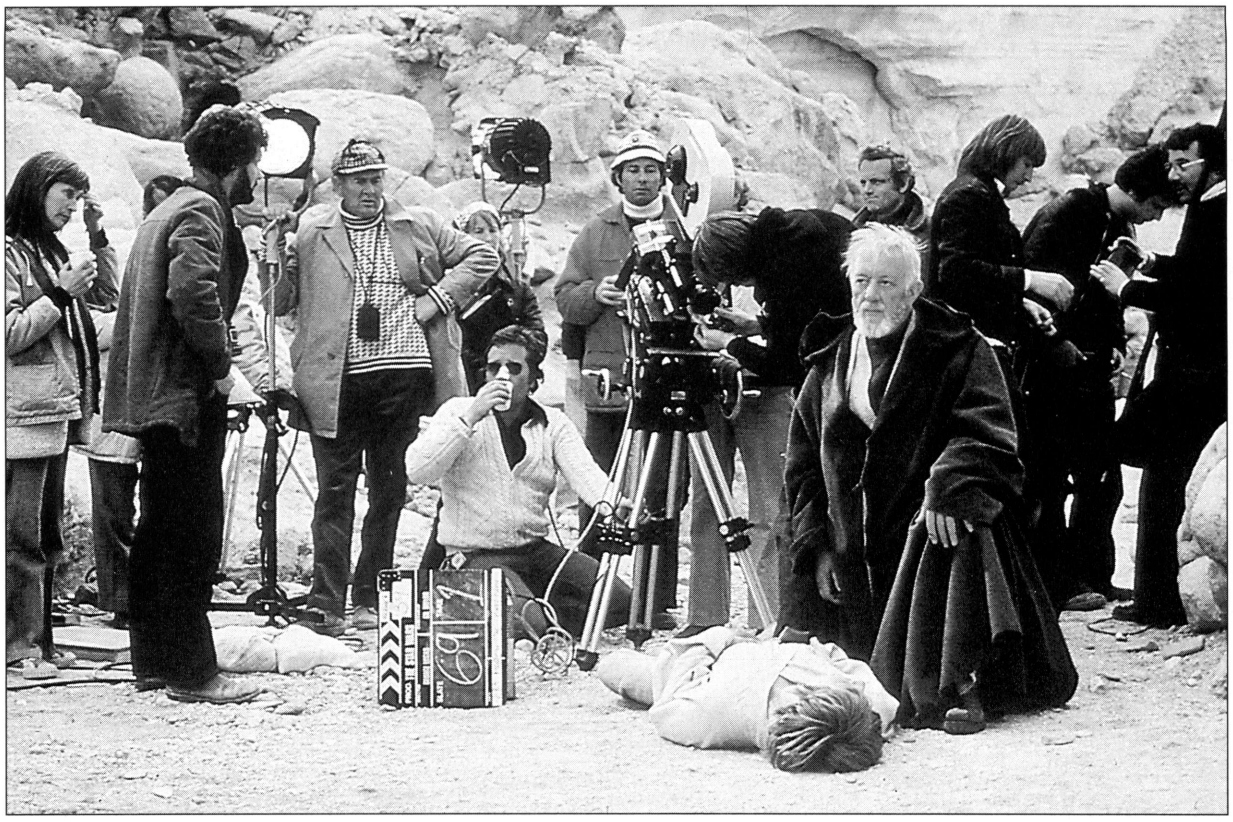

Right: ***On location in Tunisia circa 1976, Guinness ministers to a fallen Hamill. Veteran director of photography Gilbert Taylor, BSC (in cap, at left of camera) discusses the setup with then-33-year-old writer/director George Lucas (to Taylor's right). Though he found the production to be a difficult one, Taylor set the visual tone for what became a trilogy of blockbuster films. The location work in Tunisia, representing the planet of Tatooine, lasted two weeks before the production moved to Shepperton studios.***
Bottom: ***C-3PO and Skywalker peer down on suspicious Sandpeople.***

lates. "For example, in the shot of Darth Vader's ship flanked by two TIE fighters flying through a Death Star trench, George wanted us to make the villains' vessels larger and more dominant. We found the TIE fighter elements and Darth Vader's ship, but even after I found all of the other Death Star trench backgrounds for the space battle, I couldn't find that particular trench plate. Then I realized that on certain shots they had used the same take over and over again — but in different segments, to make viewers *think* it was a different background. Since the backgrounds were blurred, it sometimes drove us nuts, because we'd find ourselves saying, late at night, 'There's a triangle going by, there's a square. Okay, if a circle follows that, then that's the right one!' A lot of times things worked in reverse, which just made things that much harder to piece together."

As he got deeper into the process, Tanaka found himself marveling at the ingenuity of *Star Wars*' original visual effects artists, who, pressed for time, had often made do with the backgrounds they had rather than reshooting new ones. "I had to think in terms of optical compositing as it was practiced 20 years ago, and what they had done was very impressive to me: a lot of times I'd find an element and say, 'My God, that would be the right element if only it moved in reverse and was flopped!' Then I'd realize that that's what they had done! It drove me a little nuts sometimes."

Tanaka and his team were scrupulous in their efforts to find original elements if they had to recomposite a shot. "I literally had nights where I spent hours on a Moviola tracing the pattern of a moving starfield onto a cel animation sheet," Tanaka recalls. "Then I loaded the Moviola with different starfield background elements until I found the right pattern that lined up with the shot."

One of the most difficult *Star Wars* puzzle pieces to locate was the original Jabba the Hutt se-

quence, during which he confronts Han Solo at the Millennium Falcon within the Mos Eisley spaceport. Dissatisfied, Lucas had cut the scene in his final 1977 edit and the original 35mm negative had been lost after being reduced to 16mm for the documentary *From Star Wars to Jedi: The Making of a Saga.* "We never did find the original negative, but the interpositive was finally discovered at the Ranch," Tanaka reports. "Since the interpositive was one step away from the negative, there was more grain, which meant we had to resort to different innovative ways to try to re-create that shot. Ultimately, we found ways to extract the grain."

That trial-by-fire sharpened the skills of ILM's restoration team in ways they had not expected, which became especially valuable when restoring the sequels. "On *The Empire Strikes Back* and *Return of the Jedi,* we're scanning everything from the interpositives," Tanaka says. "The work we did on the Jabba sequence enabled us to refine our digital techniques for diffusing grain buildup, which set the precedent for dealing with those later films."

However, the sequels presented fewer challenges in terms of finding old footage and selecting negative, because ILM had used a computer logging system during the latter part of production on *Empire* and during the entire making of *Jedi;* the material could simply be punched up on a workstation. Nevertheless, Tanaka and his team required sharp eyes and dogged determination to find the missing pieces of the *Star Wars* trilogy and complete the restoration to George Lucas' exacting specifications.

Ultimately, jokes Tanaka, the restoration team had to become as obsessive as Lucas himself. "*Star Wars* came out when I was in elementary school, and all of the kids I knew used to brag that they'd 'seen it 50 times.' Well, here I am 20 years later, and now I could one up all of them by saying, 'Well, I've seen each *element* 50 times!'" ◆

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An armada of Rebel X- and Y-wing fighters pass the planet of Yavin before engaging the Death Star. These newly created CG ships proved difficult to match to their 1977 model-built counterparts, as the bluescreen/optical printing process had added unanticipated shifts to the original fighters' color schemes. A digital solution was soon found to re-create the appropriate hues.

An Expanded Universe

Digital and analog special effects collide in the retooled version of *Star Wars*.

by Ron Magid

For many movie mavens, *Star Wars* represents the ultimate in science-fiction cinema. At the time of its summer 1977 release, the film showcased some of most wondrous special effects ever to trip through an optical printer, visuals which subsequently earned Academy Awards for John Stears, John Dykstra, ASC; Richard Edlund, ASC; Grant McCune and Robert Blalack. The end result of their efforts arguably displayed the most important technical achievement in filmmaking since the traveling matte. Whatever your personal feelings about this space opera, the film refined motion-control cinematography to the point where it became both a creative and extremely efficient approach to the effects process.

So, 20 years later, what's wrong with *Star Wars*? Plenty, according to director George Lucas, who initially envisioned the film as a springboard for a series of nine films divided into three separate trilogies. The filmmaker has always been pained by the technical flaws in *Star Wars* and its two sequels, and reportedly poured more than $10 million into restoring and updating the original trilogy's landmark miniature and optical effects to the current digital standard. Remarkably, the $10 million price tag of the three new Special Editions is almost equal to that of the entire negative cost of *Star Wars* itself (in 1977 dollars). But according to Lucas, the experience of viewing his original vision onscreen for the first time was worth every penny. "When I was working on the film, we fell short in certain areas because we were trying to do so much," he says. "We did the best we could under the circumstances, and they were extraordinary, but we got the chance to go back and make the film closer to what was originally envisioned."

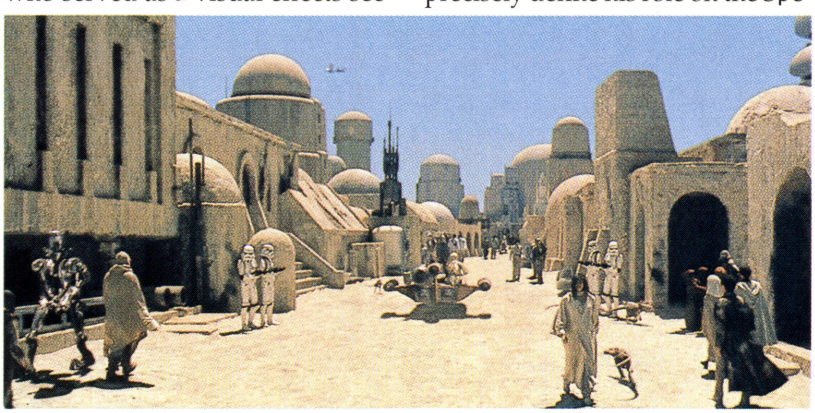
Lucas recruited producer Rick McCallum and visual effects producer Tom Kennedy to shepherd the work on *Star Wars*. The two men had worked with Lucas before, pioneering the use of inexpensive digital effects as a means to dramatically increase production values on the *Young Indiana Jones* TV series and the feature *Radioland Murders*, respectively.

Says McCallum, "On *Young Indy*, we wanted to set a template for a way to make features, and now we're applying that template to the existing *Star Wars* trilogy and, hopefully, the prequels. For the redo, we didn't change anything more or less than what George wanted. There have been special editions of other films where directors have gone back to restore the cut the studio took away from them, but nobody's ever gone back to reshoot and augment those things that they clearly saw but couldn't achieve at the time. It's such a romantic vision."

Recalls Kennedy, "George said, 'As long as we're going to re-

release *Star Wars*, I always wanted to do more in the sequence at Mos Eisley [the metropolitan spaceport of Tatooine] because the town didn't appear large enough.' So we went back to expand Mos Eisley, and then to do matte paintings of the Sand Crawler and Jabba the Hutt's lair. The initial scope of it involved just two dozen shots."

However, everyone involved with the Special Edition has a different recollection of how the process came together. "I remember first hearing that they were going to re-release the movies in anticipation of the new series of films," says Dennis Muren, a senior visual effects supervisor for ILM who served as a visual effects second cameraman on the original *Star Wars*. "A few weeks later, I heard that George was going to add some scenes that he had always wanted to do, and fix some things up. I felt we could improve the matte edges on some shots that had been done at the last minute — particularly those involving explosions. But there were also a number of shots in the space battle where the movements just weren't right. If we could smooth them out, the action would have more clarity, and viewers would be able follow the movie a little better. I suggested digitally re-doing shots in which the models were moving incorrectly."

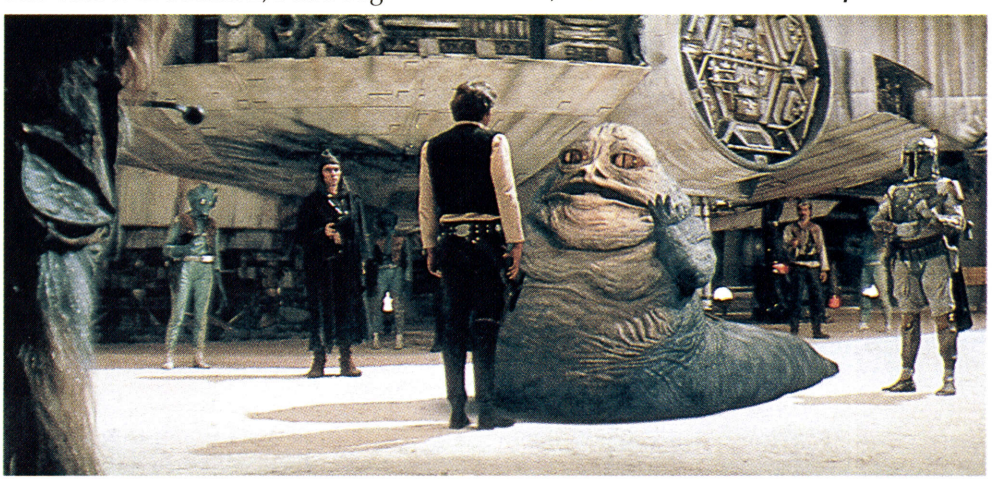


Any concerns about using digital technology on a film 20 years old soon vanished in the wake of Lucas' growing enthusiasm for the project. Many of the Special Edition's new effects fall under the category of what Kennedy calls "further faster" shots, where computer-generated X-wing and TIE fighters were made to move twice as fast, and therefore travel twice as far, along their original trajectories. "In 1977, we couldn't make the ships start any bigger and get any smaller because we had only a three-foot run on the Dykstraflex [motion-control camera, designed by John Dykstra]," says Lucas. "But now, doing everything on a computer, we can make these shots be whatever we want them to be. It just means that some of the shots are more dynamic. They're the same shots, but they're cleaner, they look better and, in some cases, the ships move better."

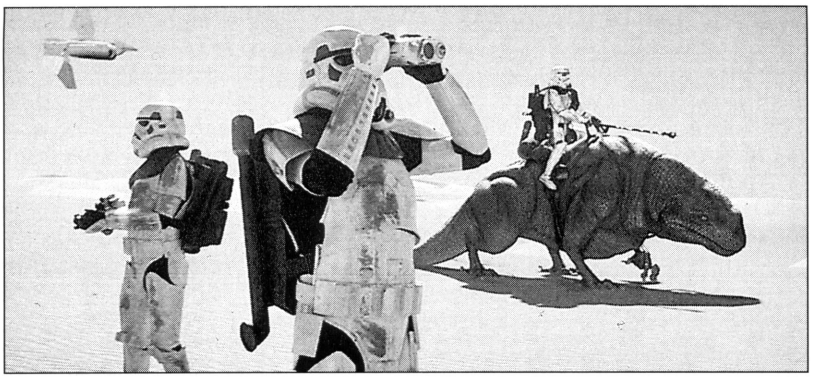
Although Muren does not precisely define his role on the Special Edition, ILM's effects artist emeritus made some significant contributions to this effort in its early stages. "I was kind of a supervisor at the beginning in that I was not just trying to get the shots looking good. I was also saying 'Here's how these maneuvers should happen' when John Knoll was doing the first animatics on the Death Star battle. In addition, I had suggestions about the sort of technology we should use. We did a lot of full animation and rendering tests at the beginning, comparing several different software packages. I felt that we shouldn't necessarily just look at the old way of doing things or the ILM way of doing things, but see if there was some other way to do it."

Lucas wanted the new effects to appear as if they had been generated during the era of the original *Star Wars*, despite the fact that Jabba and the other CG creatures populating Mos Eisley were then technologically impossible to achieve. The film's original models had been re-shot to good effect in the *Star Wars* segment of NOVA's 70mm *Special Effects* venue film (see *AC* Aug. '96), but Muren refused to consider using those same models again for the new Special Edition shots, opting instead to recreate them via computer. "Spaceships flying around have been done so many places digitally — and so successfully — that it just didn't make any sense for us to do it any other way," he maintains.

The same can be said for the Special Edition's most audacious moment: the restoration of a deleted scene depicting a meeting between smuggler Han Solo (Harrison Ford) and his gargantuan employer, Jabba the Hutt. While Jabba appeared in the sequel *Return of the Jedi* (1983) as a giant slug-like puppet created by the ILM Creature Shop, the original Jabba featured in the 1977 sequence was a portly Scotsman clad in a furry vest. While planning the Special Edition, Lucas realized that the



Left: ***The expanded spaceport of Mos Eisley. Newly created droids, stormtroopers and architecture help fulfill Lucas' vision of a "wretched hive of scum and villainy."*** **Below:** ***Han Solo (Harrison Ford) is confronted by Jabba the Hutt and bounty-hunter Boba Fett. Working with an interpositive made from the original 4-perf negative as their plate, animator Steve Williams and CG supervisor Joe Letteri integrated the new characters with Ford's 1977 performance.***



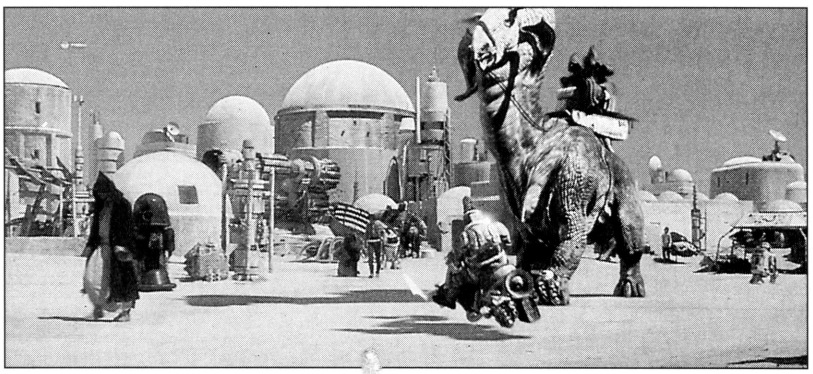
Top: ***A detail of Imperial stormtroopers hunt for C-3PO and R2-D2 in the Tatooine desert. The troopers' dinosaur-like dewback mounts were created using*** **Jurassic Park-** ***era CG techniques.*** **Star Wars** ***cameraman Gilbert Taylor, BSC's use of nylon stocking nets played havoc with the animators' efforts to convincingly combine the creatures with the original 1977 production footage.***
Bottom: ***Jawas ride a towering ronto through Mos Eisley.*** ***Off-the-shelf*** **Jurassic Park** ***brachiosaur CG architecture was used to create the beast.***

only way to add the extraterrestrial equivalent of Sidney Greenstreet into the shots was via digital technology.

Fortunately, animator Steve "Spaz" Williams (*Jurassic Park, The Mask*) and CG supervisor Joe Letteri (*Jurassic Park, Casper*) were available to join forces on the complex task. Their first conference with Lucas led to some interesting mutations of the Jabba concept established in *Jedi*. Recollects Letteri, "George wanted to put Jabba on a floating anti-gravity couch, because that's how we saw him in *Jedi*, but there were two problems with that: first, Harrison Ford was talking to this guy who was shorter than him, so Ford's eyelines were looking down; secondly, having Jabba just sort of floating around was not that interesting, so we thought, 'What if we put him on the ground?'"

Grounding Jabba and making him more svelte placed him in Ford's eyeline. But this created the greater dilemma of how to execute the character's movements. Steve Williams infused the CG creation's movements with the coiled power of a rattlesnake, but Letteri reveals that "a sea lion was actually the model we used, because Jabba had to throw his weight forward, bring his tail up and push off with it. We wanted him to have this big, thrusting-his-weight-forward movement, so he'd feel really massive and really menacing."

Remarkably, Williams and Letteri tackled the five Jabba shots at the end of 1994, prior to the ILM sofware group's development of the Caricature animation program. Caricature had enabled animators on *Dragonheart* to work



with fully shaded models in real time, resulting in excellent lip-synch animation. For the *Star Wars* Special Edition, however, Williams was still working with the less-facile technology used on *Jurassic Park* and *Casper*. "Spaz just hand-animated all of the lip-synch because that's his style," Letteri marvels. "[Sound designer] Ben [Burtt] did the voice track first. After George approved it, Steve animated to it using *Jurassic Park* technology. He animated the mouth as if it were a hard, almost horn-like material, but with a little more flexibility."

While Williams modeled and animated Jabba, Letteri was responsible for the scene's look and lighting design. "We tend to work like a director and cinematographer," Letteri says. "My job was a bit different than that of a traditional director of photography in that I had to figure out what the inside of Jabba's mouth and his tongue looked like, and how much drool there should be on his chin. I used the original Jabba's textures for reference; the CG model was constructed differently, so we had a Viewpaint artist paint it by hand. I also did a fair amount of repainting myself, and I adapted the shaders I had designed for *Jurassic*'s T-Rex for Jabba's skin and surface textures. I also used some new eye techniques I'd designed for *Casper* to give Jabba eyes like a cat's or a serpent's. That varied from the original, but I wanted something a little more organic than those glass eyes. George just said, 'Go for it!' He liked the eyes."

Lucas did make one last-minute addition to the sequence that helped to unify the trilogy: as Jabba rejoins his henchmen, the familiar figure of bounty hunter Boba Fett follows the overlord out. With this scene, Lucas managed to unite the villains of both *The Empire Strikes Back* and *Jedi* in the original film.

A further host of challenges emerged from the fact that in the original sequence, Harrison Ford had walked behind the actor playing Jabba. In order for Han to tread behind the new Jabba, he had to step on his tail. "It's either over him or on him," Letteri grins, "so we decided, 'Well, let's make Han step on him!' George wanted to keep the action the way it was, and Han was the only character who could have gotten away with it."

Williams altered Ford's movements to accommodate the insouciant action. "Spaz didn't just track Ford up in the frame behind Jabba," Letteri explains. "He had to do a little bit of animation, because a step up involves a lot of body movement, so he cut up all of the pieces and put them back together with the right attitude."

At times, the CG Jabba head was situated off to the side or lower than the head of the original actor, so parts of the actor would occasionally bleed through. Letteri

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recalls, "Since this was a traveling shot, we wound up having to reconstruct the whole background behind him. A lot of it had to be removed, because everything kept tracking with it."

To convincingly "light" CG characters like Jabba so that they blended into the original photography, Letteri and his team struggled to reconstruct the lighting conditions of the original shots. These new "background plates," which were never designed to incorporate effects of any kind, were technically a far cry from the eight-perf VistaVision plates ILM generally prefers. In fact, the original negative from the Jabba sequence had disappeared; all that existed was a 15-year-old interpositive. Moreover, very little reference material still existed. "We dug up the camera reports, which gave us the lens and the f-stop, but that's about all," Letteri laments. "Normally, I'll break down the light, then figure out where the key, fill and the bounce sources are to try and mimic the main sources of light. But we had no idea how the shot was lit. We figured out that they had used Space Lights and silver up on top. The set had a bright concrete floor and bright walls, so light was bouncing all over the place."

Of course, the re-creation of diffuse lighting in the realm computer graphics is an extremely difficult undertaking. "Most of the lighting models we use are point lights, like arcs or spots," Letteri adds, "so we ultimately shaded a lot of hard sources into each other to produce a soft effect. We had to match the lighting in the plate because Harrison Ford was standing right next to Jabba; their lighting had to be identical. Fortunately, most of the shots had just one setup, but that last long tracking shot where Han steps on Jabba's tail was 1,100 frames, and we actually had to go through three setups for the three different points in the action."

Reconstructing the cinematography and lighting conditions for the original *Star Wars* also became a thorny issue for computer graphics supervisor John Berton, whose team was charged with fleshing out the Imperial stormtroopers' search for Rebel robots R2-D2 and C-3P0 in the deserts of Tatooine. Lucas wanted to expand the presence of their dinosaur-like mounts, called "dewbacks" — which appeared as full-scale puppets in only a few shots in the original film — through usage of ILM's *Jurassic Park* technology. Thus, Berton and his technical directors struggled to blend their CG characters into nearly 20-year-old footage. "Our background plates came from the original negative, which was shot straight up in four-perf 35mm," Berton explains. "To add in our computer graphics characters, we had to figure out how the initial images had been constructed from whatever historical notes existed and our ability to read an image."

Star Wars' director of photography, Gilbert Taylor, BSC (*Repulsion, Dr. Strangelove, The Omen, Flash Gordon*), had used what appeared to be an exotic Pro-Star filter to hide a multitude of sins during the desert shoot on location in Tunisia. Notes Berton, "When

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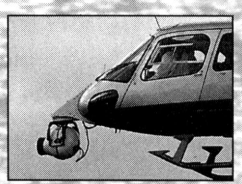

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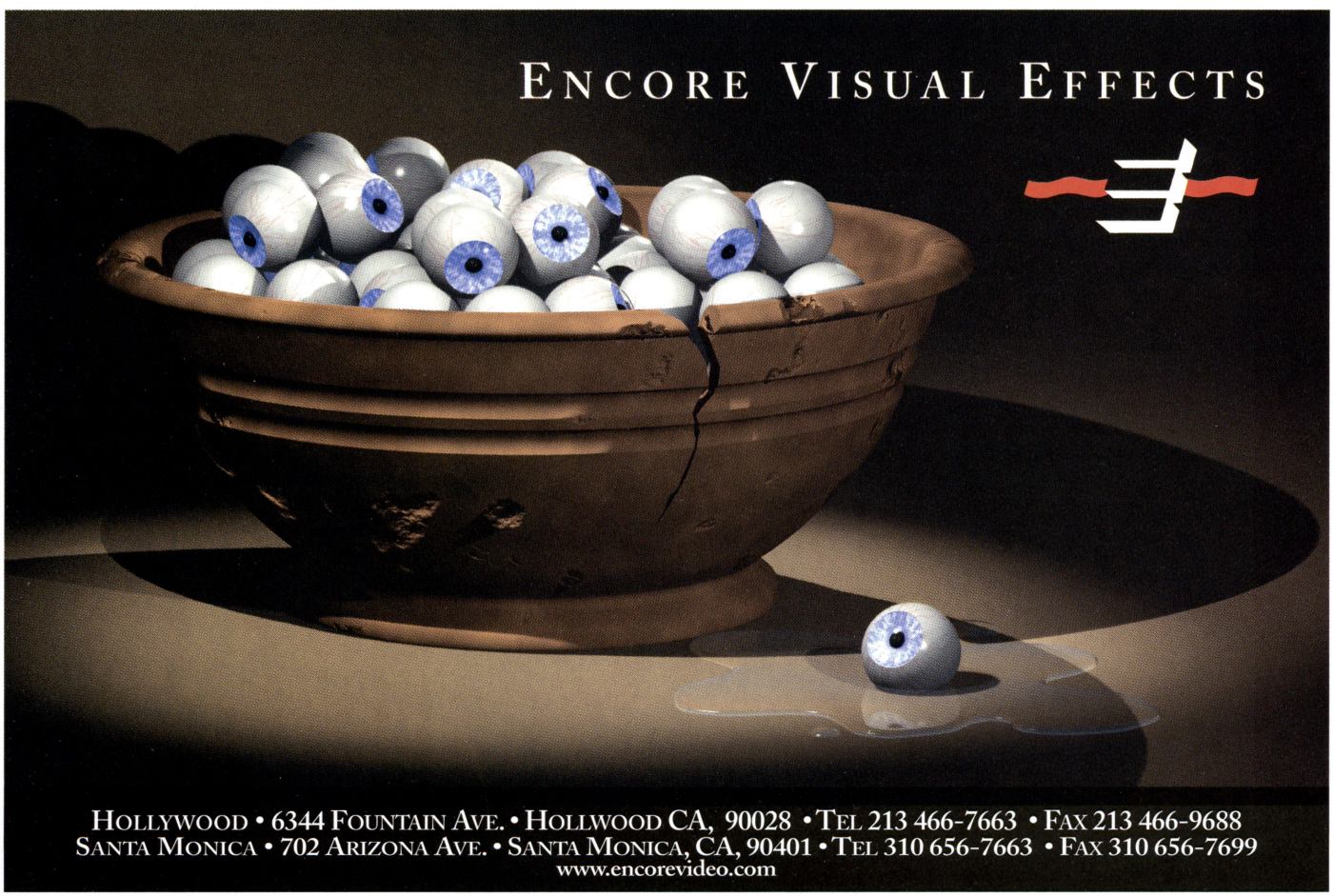
you're shooting an exterior that you want to look like another planet, and you've got a lot of detailed machinery that you're using to convey more realism than is really there, you can give the image a certain quality which diffuses those edges by putting filters on it. But you don't use filters when shooting effects plates, because it screws up the post process."

Nevertheless, Lucas wanted the dewbacks, and the stormtroopers who rode them, to be in those shots. Berton and his technical directors had to figure a way to put the same filter over the new CG elements. But since the filter wasn't listed in the original camera notes, Berton's team had trouble determining exactly which Pro-Star was used. "One of the famous moments of the show occurred when we had George in to look at our footage," Berton relates with a grin. "We said, 'We're really concerned about trying to match these computer graphics dewbacks into the existing footage because we're seeing all of these star-cross filters everywhere, and we're looking at how to emulate something like a Pro-Star in an image processing format.' And George said, 'Well, you know, we just put nylon stockings over the lens in order to give the desert some diffusion that would really make the stormtroopers look good!' People don't put nylon stockings over their lenses these days, but back then it was a common practice. Computer graphics, needless to say, were not common. But somehow we had to meld those technologies together. We eventually wrote image-processing programs that basically spread out the high-end light in a way similar to how a nylon net would do it; we then added little rings of color to give the spectral range."

Compared to the photographic issues, the modeling and animation of the dewbacks and other CG characters followed the standard evolution of digital effects: the models were first constructed as wireframe armatures in Alias, then animated, and finally textured and rendered in Renderman. In spite of their white plastic armor, the CG stormtroopers riding the CG dewbacks presented problems unique to the human form. "There's a reason we started out with liquid-metal men and dinosaurs as we began making great strides in effects at ILM," Berton says. "People are tough [to animate] because we know what they look like. And the closer you get to something familiar, the more precise you have to be in your thinking to make them move. Real human beings are much harder because they have facial features and hair, which we were glad to dispense with. But finding a way to produce realistic movements became a really big issue with regard to the stormtroopers. They were relatively easy to assemble because computer graphics mimic plastic rather well, and we also had all of the reference footage we needed to build the models. But eventually, it came down to real motion. The stormtroopers still move like human beings because they're guys in armor suits, so to take a CG stormtrooper and put him right next to a guy in a suit in the same



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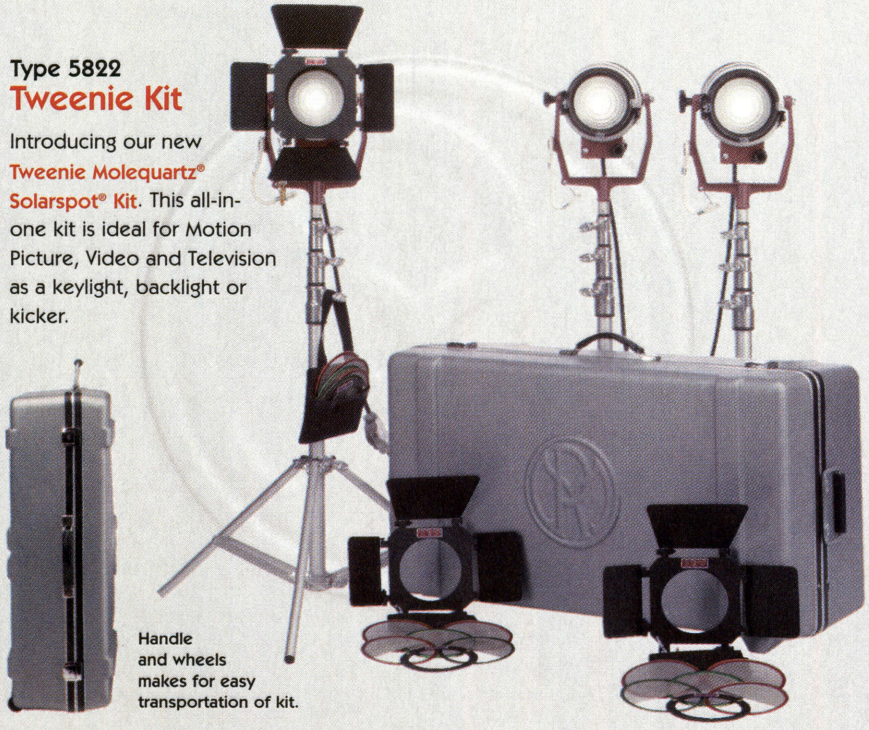

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shot, and make it work, was no small task."

That *Star Wars* takes place in a retrofitted future led to further complications. "Everything was dusty, everything was dented, and this understanding of everyday wear and tear gave realism to the images," Berton opines. "But we had to deal with that too. So just when you think, 'Oh good, stormtroopers — white plastic with black,' George has done us the favor of making it difficult again because of all the dirt and mud. So we used the same techniques for painting textures onto dinosaurs to paint dirt onto the stormtroopers. Some of it was painted on by hand, and some of it was done with computer graphics procedural techniques — adding dirt into the perimeters which created the renders, like noise fields."

In one of the most startling shots set in the rolling dunes of Tatooine, a stormtrooper rides a dewback across frame in close-up. For a shot in the Mos Eisley spaceport, a stormtrooper dismounts a dewback in the background behind C-3PO and R2-D2. These disparate shots illustrate the problems involved in creating realistic human animation. Berton explains, "In the first shot, the rider's motion was a little more repetitive. But when the focus is on something that's not moving that radically or going through such an obvious motion as dismounting, we had to pay more attention to the nuances, because anything can give away an animation cycle. I think the dismount was the best job we did on the stormtroopers. The dismounting trooper was in a scene in downtown Mos Eisley. It involved a very difficult camera move which we had no record of, and the lighting conditions were changeable and more complicated than in the dunes. Although dismounting is a very clear action, and we had lots of reference of people getting off horses and climbing down from elephants, we still worked very hard to make that shot work."

While the dewbacks are associated with the Empire's military campaigns, two other native Tattooine creatures are seen roaming the streets of Mos Eisley: the

brontosaur-like "rontos" (the Jawas' beasts of burden), and the diminutive, feral "scurriers." Berton explains, "We were trying to build some creatures into the city that would really give it some scale and some mass."

A potent combination of dewbacks, rontos, scurriers and many ILM employees, family members and friends — shot against bluescreen and disguised as stormtroopers, aliens and desert dwellers — successfully transformed the once-sleepy spaceport into the fabled "hive of scum and villainy" that erstwhile Jedi Knight Obi-Wan Kenobi described it to be. But ILM didn't simply make Mos Eisley seedier; the spaceport was also enlarged, thanks to the efforts of digital matte department virtuosos Yusei Uesugi and Paul Huston.

During his career, Uesugi has made the lightspeed jump from traditional painted-glass backgrounds to computer technology. He used various 3-D modeling programs to build Mos Eisley in CG, creating beautiful backgrounds for effects shots that parallax flawlessly with camera movements. "The shot where Luke's landspeeder comes into Mos Eisley involves a crane shot that starts on two robots fighting. We then move up as the speeder goes into the city, and we see rontos and hundreds of people, mountains in the background, and spaceships flying around," Berton marvels. "That's a totally synthetic shot, and that's the wave of the future in terms of what I call Digital Cinema."

Conversely, Huston, who built models for the original *Star Wars*, used his expertise to construct a miniature Mos Eisley set from foam core, paint cans and plastic balls; he physically painted and aged the materials before squeezing off pictures of the model on his 35mm still camera. Huston then scanned the stills into the computer and used them as the basis for his matte painting of the spaceport.

Working in collaboration with visual effects supervisor John Knoll (*Star Trek: First Contact*), Huston also constructed a 6'-wide foam-core model of Docking Bay 94. This setting was enhanced with

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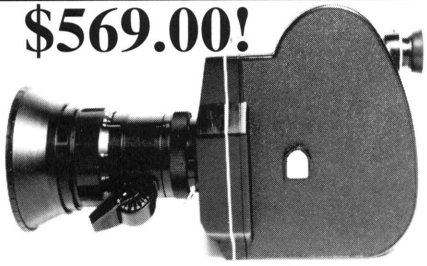

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a new high-angle shot that peers down into the bay as Han Solo's freighter, the *Millennium Falcon*, blasts off into Tatooine's upper atmosphere. Huston photographed the interior of the docking bay outside, at a predetermined time, to get the precise angle of necessary sunlight. He then painted his matte over that shot in the computer. Knoll subsequently projected Huston's 2-D painting onto some rough 3-D geometry he modeled in the computer, which enabled him to do a virtual pan-tilt across Bay 94, replete with the lens distortion of a real pan and tilt on a real set. "That way, my shot could have the proper lighting interaction," Knoll says. "The CG *Falcon* could emerge into the sunlight streaming into the bay, and cast shadows onto its walls." Knoll's main inspiration for the spacecraft's motion was a shot that happens later in the film — as the *Falcon* escapes from the Death Star, it pulls out and turns around before soaring into empty space.

The following shot, which depicts some stormtroopers in a Mos Eisley alleyway watching the *Falcon* blast off, was on Lucas' wish list from the outset. "In the original, the *Falcon* was probably a cut-out photograph just going up at this diagonal," Knoll speculates, "and the lighting didn't really match the shot's sunset look. Now the lighting's perfect. I also had the *Falcon* travel a lot faster on a curved path, so you actually see its perspective change as it gets smaller."

As for the *Falcon*'s CG architecture, the model of the complex pirate vessel required a whopping 185,000 polygons. "That was the most complex model I used in my work," Knoll reveals. "It was an immense job, because all of those little angles had to be built, along with all of the model kit detail that's bashed along the sides, in geometry." The CG model was texture-mapped using detail photographs Knoll took of the original *Millennium Falcon* miniature. "I stood the model up on end and got as far back as I could with a 10mm lens," Knoll states. "I shot it from all angles and did close-ups, with flat bounce light coming in on all sides so it was shadowless. I also took a bunch of detail shots to help us as we were building the models."

Knoll used this same approach to shoot textures for the Imperial TIE fighters and the Rebel Alliance's X-wings and Y-wings (which he also modeled) in the climactic Battle of Yavin. (Knoll's Y-wing actually incorporated about 40 percent of the CG model built in Lucasfilm's games division.) Despite the absence of any new model photography, Knoll was relatively confident that he could fashion his CG models to be easily intercut with the original miniatures from *Star Wars*; after all, he had practices such simple photographic tricks as scanning in original model textures on *Star Trek: Generations*. (see *AC* April '95).

Still, redoing *Star Wars*' final space battle often brought the original film's analog techniques into conflict with current CG technology. For example, the miniatures looked much different in reality than on celluloid. "It's amazing how much color distortion there was from the original optical bluescreen composite process," Knoll observes. "Everything that came out of the render closely matched the look of the actual models, but not how they appeared in the final composite. In 1977, after photographing the ships against bluescreen, ILM made black-and-white color separations of the red, green and blue information. They then used the blue record to make the matte, and more or less threw it away. After recombining the separations, they replaced the blue separation with a mixture of the green and blue separations; otherwise, a blue fringe would appear around the spaceships. I wrote a little plug-in for our compositing program that simulated that optical color distortion by replacing each spaceship's blue channel with a 70-30 mix of the green and blue channels."

Before animating any of the spaceships dueling over the Death Star, Knoll consulted with Dennis Muren and studied the original film to determine exactly how the X-wings maneuvered, and whether TIE fighters skidded as they turn corners. Although most of Knoll's 27 new space-battle shots

were done almost entirely via CG, scrupulous adherence to the original length of each shot enabled them to be cut into the sequence.

One of the more extensive changes involved melding two shots that formed a prelude to the Rebels' attack on the Death Star. In the original film, after several X-wings roared overhead toward the metallic planet, a reverse angle reveals the entire armada approaching the camera. "The replacement shot, at the start, is composed almost exactly like the second cut, and it ends up being composed almost exactly like the first cut," Knoll says. "Now, the shot starts on the expanded armada, and then follows an X-wing around to see where the fleet is headed. The only aspect that's actually from the original film is the fourth moon of Yavin in the background, which is Ralph McQuarrie's original matte painting."

While the marriage of those two shots into a single pan is one of the Special Edition's greatest stylistic departures from the original film, the new shot is exactly as long as the original shots combined. "We never get that close to an X-wing anywhere in the movie, and most of the shots involved much simpler pans and tilts," Knoll says. "By my reckoning, that one shot is the least successful at blending in with the rest of the footage, because it's so different. But it was worth taking that jump."

Knoll says the new effects for the Special Edition helped clarify the storytelling during a later sequence in which an X-wing picks up a TIE fighter on his tail, and then tries to outmaneuver the enemy craft. "The shots from the original film are very static," Knoll submits. "The TIE fighter is directly behind the X-wing, and they are slowly rolling in sync, which doesn't really capture what's happening in the dialogue. The X-wing pilot exclaims, "He's on me tight, I can't shake him!" So I replaced that whole series of shots — four or five of them in a row — with a lot more swerving and maneuvering and real tight turns. The new shots make it clear that the TIE fighter doesn't have a good shot yet. That's probably the best case of

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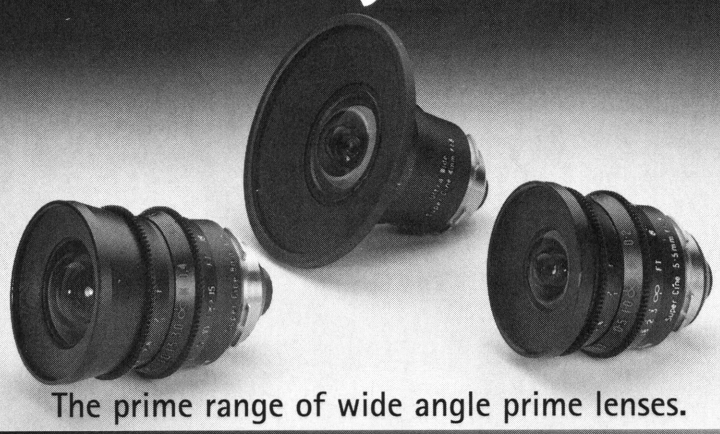

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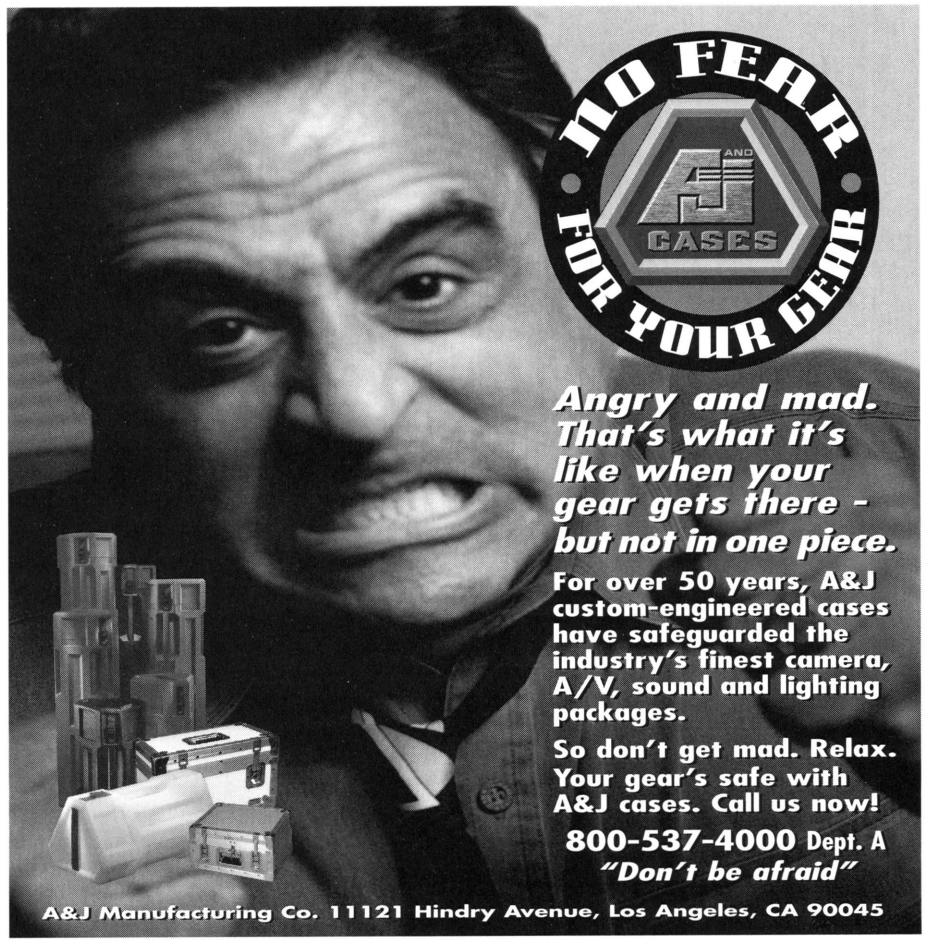

how the redo helps to tell the story in a better manner. The original shots didn't really make that point. Now, it's a much more exciting moment in the film."

There has been speculation that Lucas' real agenda on the *Star Wars* Special Edition trilogy — beyond boosting the excitement quotient — is to test new production techniques that might benefit the upcoming trilogy of prequels. As a result, the effects artists are well aware that there is a high level of expectation for the *Star Wars* touch-up. Notes Knoll, "Probably more than half the reason for doing this in the first place was to have a trial run for what's coming up. If you look at the kinds of things George had us working on, they were experiments involving questions such as 'What's it going to be like doing a shot with this many extras in it?', 'What does a typical space battle shot cost?' and 'What does it cost to take a live-action scene and put two big CG creatures in the background?' They've been very carefully tracking the actual production costs of doing that work, and I think it's so they can accurately budget the next series of *Star Wars* pictures."

> "Probably more than half the reason for doing this in the first place was to have a trial run for what's coming up."
>
> — John Knoll, Visual Effects Supervisor

Meanwhile, Lucas is banking on his legions of *Star Wars* devotees to forego the 1977 original in favor of the Special Edition, which he insists is the film he always intended to make. When Lucas is asked which version he hopes audiences will be watching 20 years from now, his candid reply is a bit Orwellian: "There will only be one. And it won't be what I would call the 'rough cut,' it'll be the 'final cut.' The other one will be some sort of interesting artifact that people will look at and say, 'There was an earlier draft of this.' The same thing happens with plays and earlier drafts of books. In essence, films never get finished, they get abandoned. At some point, you're dragged off the picture kicking and screaming while somebody says, 'Okay, it's done.' That isn't really the way it should work.

"Occasionally, [you can] go back and get your cut of the video out there, which I did on both *American Graffiti* and *THX-1138*; that's the place where it will live forever. So what ends up being important in my mind is what the DVD version is going to look like, because that's what everybody is going to remember. The other versions will disappear. Even the 35 million tapes of *Star Wars* out there won't last more than 30 or 40 years. A hundred years from now, the only version of the movie that anyone will remember will be the DVD version [of the Special Edition], and you'll be able to project it on a 20' by 40' screen with perfect quality. I think it's the director's prerogative, not the studio's, to go back and reinvent a movie." ◆

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Foul Play in High Places

Director Clint Eastwood and cinematographer Jack Green, ASC uncover intrigue in the Executive Branch with *Absolute Power.*

by Ric Gentry

Master thief Luther Whitney (Eastwood) emerges from darkness. Green often created shadowy cross-lighting to suggest the character's stealthy, secretive nature.

Photos by Graham Kuhn, courtesy of Castle Rock Entertainment.

A young woman's body lies lifeless on the bedroom floor of a Washington, D.C. mansion. Local police and detectives mill around the corpse, searching for clues that will explain this very bizarre murder. When the chief investigator arrives, he is informed that although the woman was shot twice, her throat is laced with severe contusions. The detectives deduce that the victim, the wife of a wealthy political powerbroker, was murdered as she unexpectedly walked in on a burglary in progress. "But why," one asks, "would he try to strangle her in the middle of the room and then go to the door and shoot her from behind?"

The investigators have also discovered that what appears to be a large closet with a mirrored door is actually a vault overflowing with cash, jewels, and stock and bond certificates. Further scrutiny reveals that the mirror is made of two-way glass, creating a viewing port which can be used to secretly look into the room.

This is the tantalizing setup of the film *Absolute Power,* which is based on the novel of the same name by David Baldacci. Subsequent plot points reveal that professional thief Luther Whitney (Clint Eastwood) had become trapped in the vault when the doomed young woman returned home unexpectedly, foiling his burglary. He was then compelled to watch through the mirror as she resumed an affair with the president of the United States (Gene Hackman), only to be killed by his protectors. As the primary suspect, Whitney is later pursued by the law, but also by the perpetrators, who seek to eliminate the crime's sole witness.

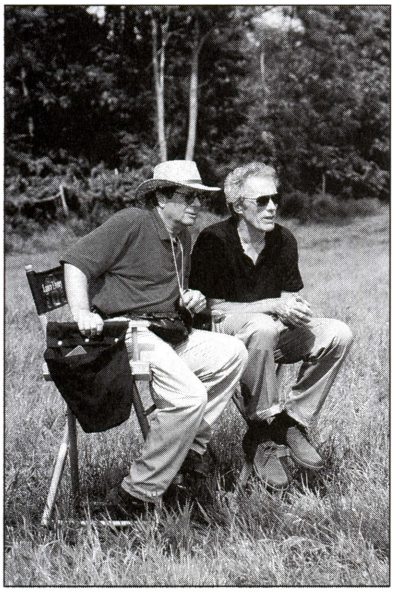
Despite the dark tone of the story, the ambience on Warner Hollywood's Stage 7 during the penultimate week of shooting could not be more serene. Director/producer/star Eastwood frequently smiles, quips and banters with cast and crew. Yet something extraordinary and paradoxical is taking place. The picture, a $30 million Castle Rock production with a cast that also includes Judy Davis, Scott Glenn and Laura Linney, is 12 days ahead of its 71-day schedule.

When the film wraps exactly one week later on August 14, it will have finished nearly 3 ½ weeks ahead of schedule.

Eastwood is renowned for working ahead of schedule; even his most recent films, *The Bridges of Madison County* (1995) and *Unforgiven* (1993), were completed nine and eight days early, respectively. But with *Absolute Power*, the director has set a new standard for himself. In an era of inflated budgets and unprecedented Hollywood cost overruns, Eastwood has spared the production between $2 and $4 million.

"I've never been on a production not involving Clint that finished early, *ever*," remarks veteran key grip Charlie Saldano, whose first film working with Eastwood was in 1978. "But this is unbelievable."

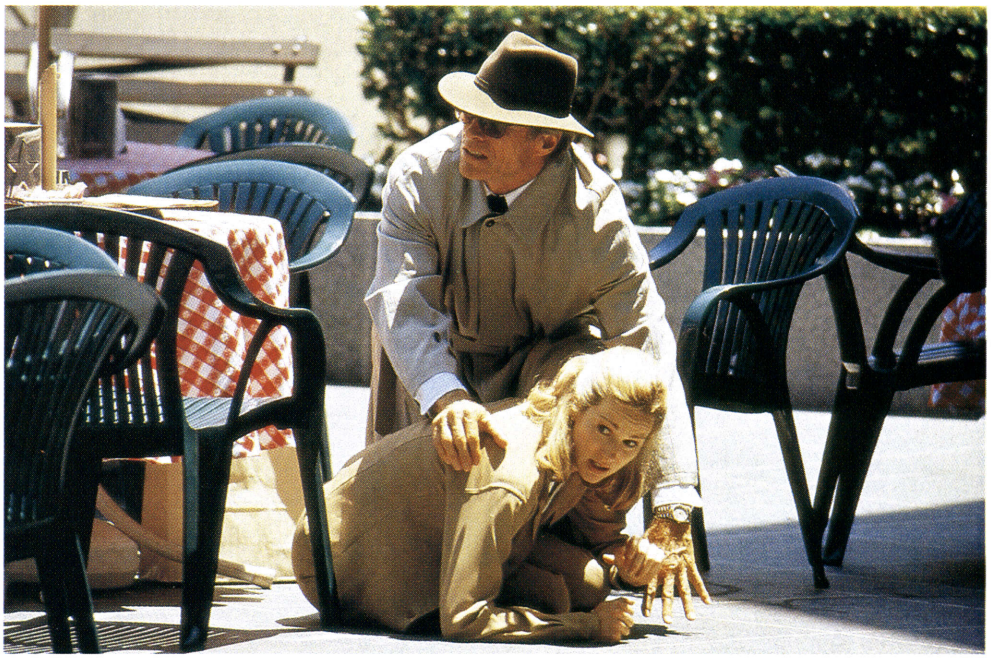
"Clint's always under," comments production manager Mike Maurer, who began working



with Eastwood in 1979. "But did I foresee this? Hell, no." (The resulting challenge for Maurer was that he had to supervise set building almost day and night and on weekends just to keep ahead of Eastwood, who was constantly closing in.)

Someone else on the set remarks that the production of *Absolute Power* is so ahead of schedule that "it's like a runaway train."

Asked about this phenomenon, the ever-modest Eastwood smiles and mildly scoffs at the notion that he is super-efficient. "Oh, we're just doing what we always do," the filmmaker says, "taking it one scene at a time."



> "Clint dislikes anything that constricts him or puts a preconceived thought into his mind. He wants to be able to walk in and do things that are completely spontaneous."
>
> — Jack Green, ASC

One essential factor in Eastwood's formula for success is his longstanding working relationship with director of photography Jack Green, ASC, who first collaborated with the actor/director 26 years ago as an aerial cameraman on his directorial debut, *Play Misty for Me*. Following a extensive period of operating (including work on 14 of Eastwood's films), Green graduated to director of photography and subsquently compiled a resumé that includes *Unforgiven* (which earned him an Academy Award nomination for Best Cinematography), *The Bridges of Madison County* (which garnered an ASC Award nomination), *Heartbreak Ridge*, *The Dead Pool*, *White Hunter, Black Heart*; *The Rookie*, *Love Crimes*, *A Perfect World*, *Bad Company*, *The Net*, and *Twister*.

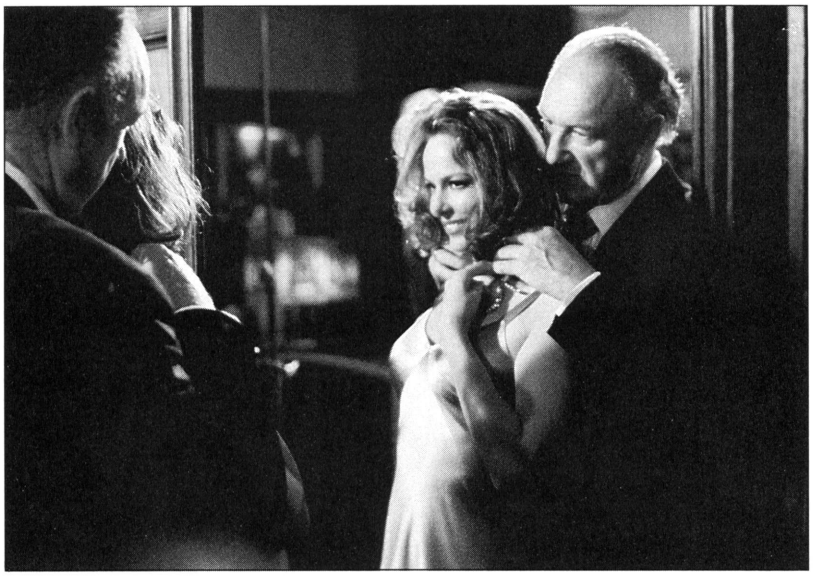
"Clint and Jack have a way of communicating that is almost telepathic," observes first camera assistant Bill Coe. "They just look at each other and the next thing you know, something's getting done."

Adds veteran gaffer Colin Campbell, "If they decided to see what they could do in a day without speaking, I don't think the approach would really change very much."

Moments later, Eastwood offers a firsthand demonstration of his everyday working ethos. "See that?" Green says, pointing toward Eastwood as the director helps his grips move a king-sized bed into position for the next setup. "That's just the way he is. It's not a put-on. He'll pick up a case and help move it. Or he'll do something like he's doing now. He likes to be part of what's going on.

"You can imagine how that influences what the rest of the crew does. Clint is who he is, but to him there's nothing demeaning about any job, absolutely nothing. People like to work for a guy like that. You can't finish a film ahead of schedule without a sense of ca-

Above: ***Whitney and his daughter (Laura Linney) are ambushed by law enforcement agents. Shooting on Paramount's Hollywood lot, Green had to keep the light consistent while filming the scene over several days. Says the cameraman*** **(at left, with Eastwood),** ***"I did that with Clint's help by staging it in one direction in the morning light, skipping around to look in the other direction in the afternoon, and shooting tight coverage in the middle of the day when we had the most control." 12K HMIs aimed through a grid provided fill and edged the actors. "We'd also use a 20' x 20' [full white] silk to take direct sun off the close-ups and medium shots."***



Right: ***The President (Gene Hackman) and his mistress (Melora Hardin) cavort before her bedroom's two-way mirror — and Whitney, who is concealed within the vault behind it. Green used interchangeable glass panels to shoot on both sides of mirror and reveal the two-way effect.*** **Bottom:** ***Many of the film's exteriors were shot at the Maryville School for Girls in Baltimore, a campus which shares Washington D.C.'s classical Greek architecture.***

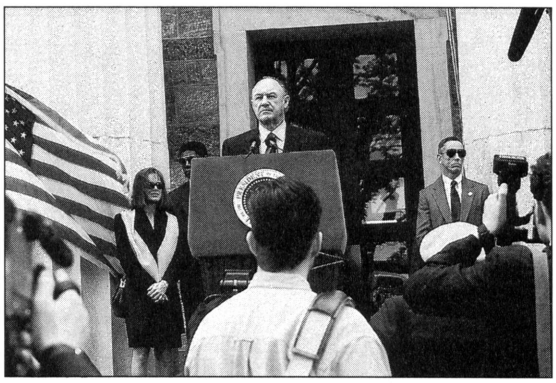
maraderie and common purpose."

Green reveals that his preproduction meeting with Eastwood about *Absolute Power* essentially consisted of one sentence. "I suggested to Clint that we use *Bird* [their 1988 biography of be-bop sax genius Charlie Parker] as a template, and he agreed. That was pretty much it."

This tactic entailed the predominant use of what Green terms "an edge light, with little or no fill," for all interior or night sequences. "That approach was typical on *Bird*," he says. "Generally, we will angle two lamps toward the camera at roughly 45 degrees behind the actors so that if they turn left or right, they will have a very delineated profile with almost nothing in the face." The resulting effect is very stark, with bright beams culling detail out of a deep, almost bulletproof wall of blackness.

"We would adjust that to what the situations on this picture dictated," Green continues, describing his approach to *Absolute Power*. "I counted on the key light, which would be the back edge cross, at an f-stop of 2.8, and any fill at a 1 or a 1.4. That gives the feeling that there is no fill light and no access to the face, except a little bit of light in the eyes or maybe a glimmer of skin tone in the shadows."

The illumination for veteran burglar Whitney's approach to the mansion is indicative of Green's edge-light principle. A prelude to the murder, the scene (like most of the film's exteriors) was photographed on location at Maryvale School for Girls in Baltimore, an institution which shares the classical Greek architectural style so predominant in Washington D.C. For overall exterior illumination, Green elevated 12K HMIs or 20K tungsten lamps on 100' Condors "so the light would put the edge on everything, including the trees and the mansion," he says. "We didn't try to make it look like moonlight. We just wanted it to be an interesting light source."



The cinematographer's intent was to objectify the elusive character of Luther Whitney by creating an environment in which "he could hide in the shadows and disappear almost at will into the blackness. That helps indicate how clever and stealthy he is. Whitney is something of a hard-to-read personality, and he is also a master of disguise."

Beyond the implementation of this lighting tactic, Green still found it is vital to light sets, such as the crime-scene bedroom, so that they could be shot from virtually every direction. "I like to light environments so that Clint has total flexibility," he says. "The night before the shoot, he usually indicates how the scene will unfold and where the camera will go, and he's certainly very well-prepared for what he wants to achieve. But Clint dislikes anything that constricts him or puts a preconceived thought into his mind. He wants to be able to walk in and do things that are completely spontaneous."

Moreover, with the sets so comprehensively lit, "we can move from the masters into the close angles with almost no readjustment to the lighting," continues Green. "This allows us to take an angle quickly and shoot as soon as the actors are ready. The idea in part is to create momentum, so that you're working from a gut-level sense of inspiration, minimizing the time it takes to imagine something and then do it."

Eastwood concurs, "It's much more interesting to me if you're making decisions on the spot. You have to have a plan, but within that plan you adjust to something new as it hits you for the first time. I try to be open to that. The [new possibilities] you find tend to be a little better than you might have expected."

In order to fully exploit the capital's panorama of monuments and famous architecture, the filmmakers shot *Absolute Power* in Panavision anamorphic with E-series lenses on Platinum and Gold cameras, and C-series lenses on a Steadicam. The cinematographer avoided filtration of any kind in order to achieve "a clean image with lots of contrast."

Green adds, "In my mind, the jury is still out on the Primos; I still like some of the older lenses. The Primos are so sharp that you have to use diffusion with them,

HENRY SANDBANK ON FILM

"Anything can be an art including the creation of commercials. The art is in how you perceive and create something. It is not enough to dream. You also have to be able to paint the picture. Film speaks a unique language that allows the audience to see the words of script. It is always changing like street art or graffiti. Today, you can capture the slightest nuances on film. If you have the guts, you can almost do anything. I'll shoot a successful car commercial, and another agency wants exactly the same look. The truth is that it's cool to be trendy, and hard to be original. Most advertisers today want to play it safe, but I'm a zealot. I try not to repeat myself or plagiarize other filmmakers. My inspiration comes from obscure sources like literature and art from other times and places. Film doesn't reflect reality. It interprets reality. There is so much clutter on that small TV box today that part of the art is to create clarity. I'll walk up to the edge of the cliff and try something original, because I'm not concerned about getting my next job. I've never worried about that."

Henry Sandbank's family immigrated to New York from Germany in 1939. He couldn't speak English, and learned to express himself with photography. Sandbank became a leading edge photojournalist and print advertising photographer during the 1960s. He began directing and shooting commercials in the 1970s, and has created more than 1,200 TV spots, including some of the most memorable ones of our times.

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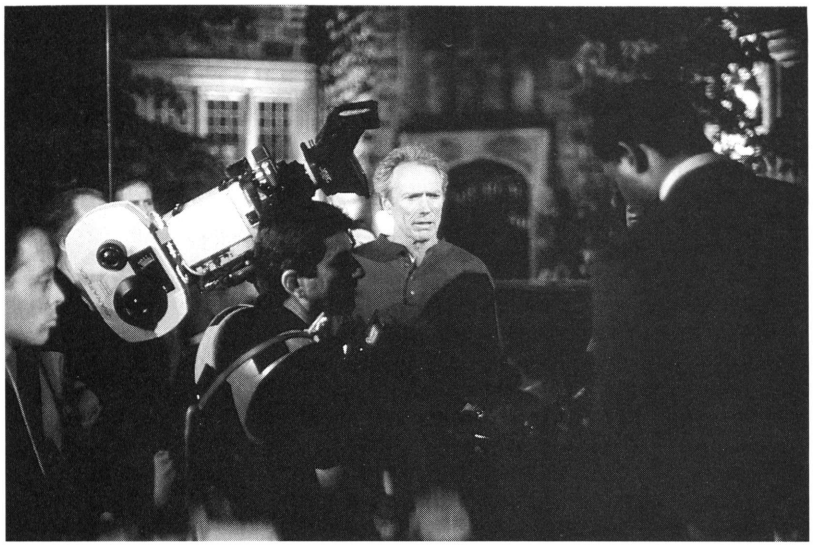

Steadicam played a key role on the shoot. Here, camera/Steadicam operator Steve Campanelli (in harness) takes his cues from Eastwood.

and Clint dislikes diffusion. I'm not that fond of diffusion either, but balancing between a long and a wide lens so that they look the same is something you have to consider, because it takes time to do. You can't spend that kind of time on an Eastwood picture. As fast as the lens can get on the camera, it's rolling, you're getting focus, and it's go, stop and print.

"We prefer the mid-range lenses, between 40 and 100mm, because they put the viewer right there," the cinematographer continues. "There's a greater sense of immediacy in that range. Neither of us likes any shot that calls attention to itself."

The cameraman recorded *Absolute Power* on Kodak's 5293 and 5298 stocks; he reduced the rating on each stock to obtain "a slightly thicker negative."

Green also tried to maintain an f-stop of 2.8 throughout the production. "While working wide open, maybe at an f1.4, nothing's sharp except at the focus plane," he says. "If you go to a 2.8, you get a bit more of a realistic vision of things. Both the actors and more of the environments around them are sharp. Basically, we're always trying to make the scenes look more realistic."

One of the major technical challenges on *Absolute Power* involved the lighting and exposure for both sides of the bedroom vault's two-way mirror, with Luther Whitney on one side, and the wife and her lover on the other. "When I find that type of setup in a script I ask myself, 'My God, how am I going to accomplish that?'" Green says. "In this case, we had to think it all out very far ahead, since we would be starting the bedroom scene on location and finishing it on the set 50 days later. You have to know where you're headed before you get there."

Though the scene seems to be lit solely by the flashlight Luther carries as he proceeds through the huge home and into the bedroom, eight dimmer-controlled 75W quartz lights were brought up as Eastwood entered the vault, and then subdued when the door closed. When the other actors entered the scene, lights in the bedroom were raised, but as Green notes, "from Luther's perspective behind the two-way mirror, that light would be decreased in value. We had to be keep it looking a bit darker from his perspective.

He elaborates, "We had three pieces of glass cut to fit the vault door — an actual mirror, a two-way mirror and a clear piece of glass. All of them could be interchanged within five or 10 minutes. When we were in the bedroom looking at the vault, we used the real mirror, because it provided the brightest reflection. From inside the vault looking out, a real two-way would cut down too much light — about 2 ½ stops, which

Mike Hoover puts the OConnor 2575B through its paces filming the 1570 production, "Zion - Treasure of the Gods"

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A pair of detectives (Ed Harris and Scott Glenn) close in. Since much of **Absolute Power** *takes place at night, Green sought out bright daylight to provide stark contrast, exploiting the wide latitude of Kodak's 5293 film stock.*

didn't allow us to see into the room very well — so we used the clear glass. We then brought the light down one stop on the lens to simulate the dimmer view through the mirror.

"For the following scene involving the investigating team, we used the actual two-way mirror, so that we could show both sides of the glass -- revealing the practical mirror effect."

Eastwood tends to work a set as if it is a practical location; the walls were rarely moved for the entire sequence involving the 30' x 30' bedroom and vault annex. Therefore, the crew often had to scramble to avoid being reflected in the vault mirror while the camera was panning. The set's oak ceiling also compounded the problem of concealing lights. "That was very difficult," says key grip Saldano. "It's going to look great, but you'll wonder how Jack lit it when you can see the whole room, especially since Clint dislikes multiple shadows. We had lights all over, but we scrimmed and flagged off certain areas where they crossed each other, which kept them out of every shot.

"By the time the detectives are there in the early-morning scene, we've seen that room with five different kinds of lighting: on a previous day with daylight; at night with almost complete darkness except for a flashlight and some moonlight; in a romantic kind of light; and at night with bright lights on. Some of those situations were very, very tricky, but we still maintained our pace and finished early every day."

Eastwood's penchant for naturalism further enhances the immediacy of his films. "I don't like things to be too perfect," he remarks. "I prefer a little coarseness, like the grain in wood or the lesions in leather, something made from real material rather than something that's overly slick and

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manufactured."

Similarly, the director encourages the actors to perform with a minimum of premeditation or repetition. In fact, he invariably films rehearsals. "On this picture, I'd estimate that we printed the rehearsals and moved on to the next shot about 25 percent of the time," Green says.

In going for a take, actors are not expected to hit exact marks. If they're somewhat imperfectly lit, Eastwood and Green sometimes consider it a virtue. "The idea is to give the actors as much freedom as possible," Green says. "We tend not to block out actors on specific marks unless it's absolutely critical. Sometimes they walk into shadows and make a speech in the dark."

As an example of this, Green cites the scene in which the detectives investigate the bedroom. "There's a streak of sunlight coming through the window. It's a very narrow corridor of light [created by a 20K situated 15 feet beyond the window], and they walk in and out of it. One minute the actors are underlit to the point where they're almost black, and then they're overlit to almost two stops over.

"Those are the kinds of things Clint and I really respond to. Again, I refer to *Bird*, in that it delineated clearly what we had been working for in all of our previous pictures. It was like a jazz piece, in that it felt like an ad lib; everything felt like a real moment. So in this particular scene on *Absolute Power*, the detectives didn't get the light because their feeling in the scene didn't take them there. That was the real truth of the moment."

Eastwood's striking use of Steadicam — employed on one-third of *Absolute Power* — underscores the director's attempt to narrow the gap between fiction and the "authentic moment." The picture's Steadicam operator, Steve Campanelli, explains, "We basically discover a shot as it happens, making adjustments for the actors and framing the scene accordingly. Clint will sometimes walk me through it. He'll say, 'Steve, we've got to be here at this point when she gives us that look; then she'll turn toward the camera and I'd like a medium close-up. After that, she's going to walk over here, and it should be a medium over-the-shoulder on him.' Then he kind of lets me compose it. He'll correct me if he needs to, and he always tells me *why*, but Clint knows what he wants and how he's going to cut it. But the Steadicam by nature is rather unpredictable, just as a filmed re-

> "I don't like things to be too perfect. I prefer a little coarseness, like the grain in wood or the lesions in leather, something made from real material rather than something that's overly slick and manufactured."
>
> — Clint Eastwood

hearsal is unpredictable. There's a margin of 'not knowing' that makes it so exciting."

That uncertainty is amplified by the fact that, despite all of the spontaneity and improvisation he encourages, Eastwood never uses a video assist. Comments Campanelli, "I've operated on about 15 films [including *Congo* and *Twister*] and the only two without video assist were *Bridges of Madison County* and this one. When I first worked with Clint I was so nervous. I thought, 'No video assist? *Really*?' Usually, all I have to do is concentrate on the framing, because someone else will be watching for performance. But here I have to look at it all, especially when Clint's in the shot and he's relying on me to tell him whether it worked or not. It keeps me really sharp. It's a wonderful opportunity to have so much input. But that's how Clint is. He trusts everyone to do their own job."

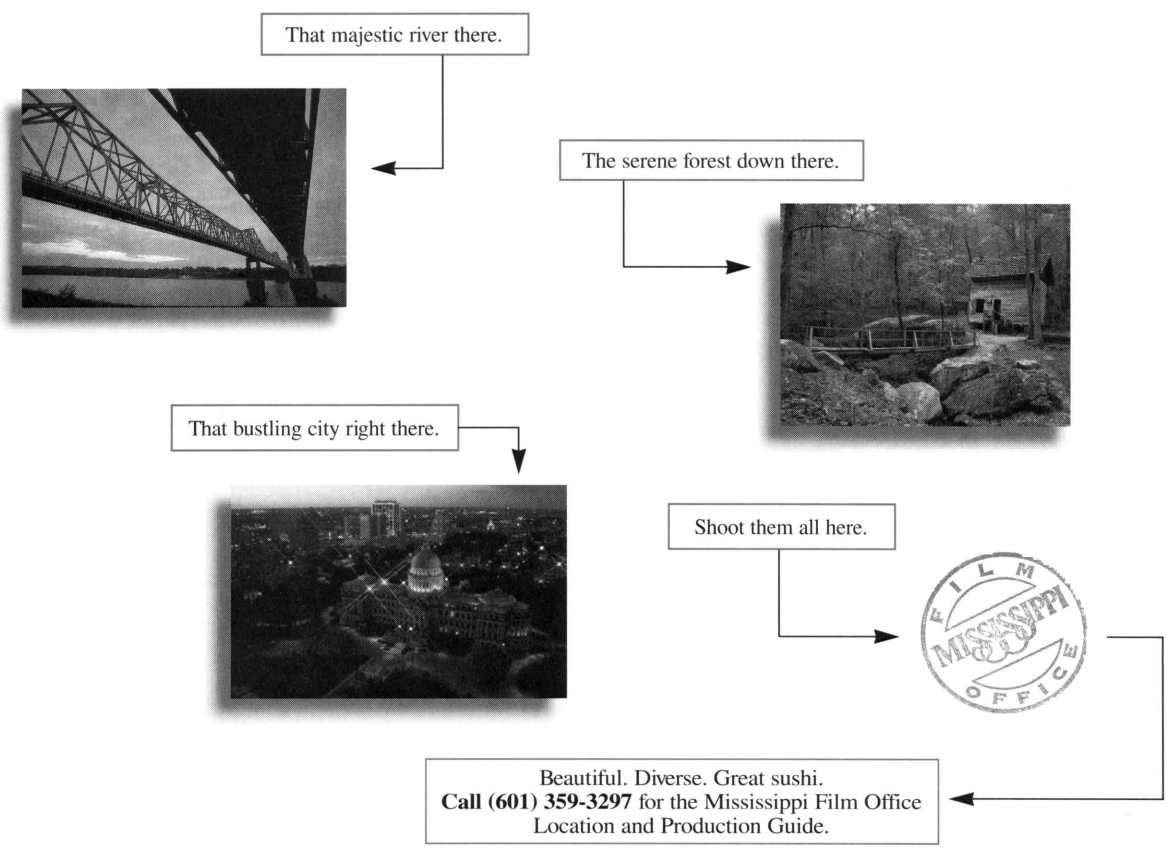
One of the most demanding applications of the Steadicam on *Absolute Power* occurred during a dance sequence involving the President of the United States and his female chief-of-staff in the East Wing ballroom of the White House. Eastwood points out that "the Steadicam was used exclusively. In the old days, you'd put a camera on the floor and the actors would move around it. But this way, the camera becomes an unseen part of the dance, moving with the actors. There's no track to trip over, and they don't have to think about where the camera is positioned. You get reverse sides."

Much of the scene's success is due to the dexterity of first assistant cameraman Bill Coe, who routinely paced Campanelli and adjusted to his movements with a remote follow-focus supplied by Preston Cinematography. Coe estimated that the camera's continuous kinetics entailed some 50 to 100 focus changes.

The dance, during which the players exchange heated words beneath the pleasant surface of formality, is a nearly four-minute sequence executed in waltz-like, twirling motions over a 30' x 50' floor amid numerous other dancers; the camera's proximity to the actors varied between 3 and 15 feet.

Including a master, there are 12 shots in the sequence, but there were never more than two takes per shot. The scene was scheduled to be shot over five days, but was completed in just two. "Like Clint says, if there's nothing wrong with it, why do it again?" Coe remarks. "But some days for me are better than others, and Clint will sometimes suggest, 'Just use the Force.'

"What's great about working with Clint and Jack," Coe concludes, "is that people are allowed to feel secure in trying things. You're not berated if you don't get it right. In fact, they're both complimentary. One day after the dance sequence, I was measuring out a stationary shot with a tape and Clint turned to me and said, 'What do you need that for?' He was implying that if I could get the takes done on the ballroom floor with all of those changes, I wouldn't need to use a tape. That kind of thing makes you feel pretty good." ◆



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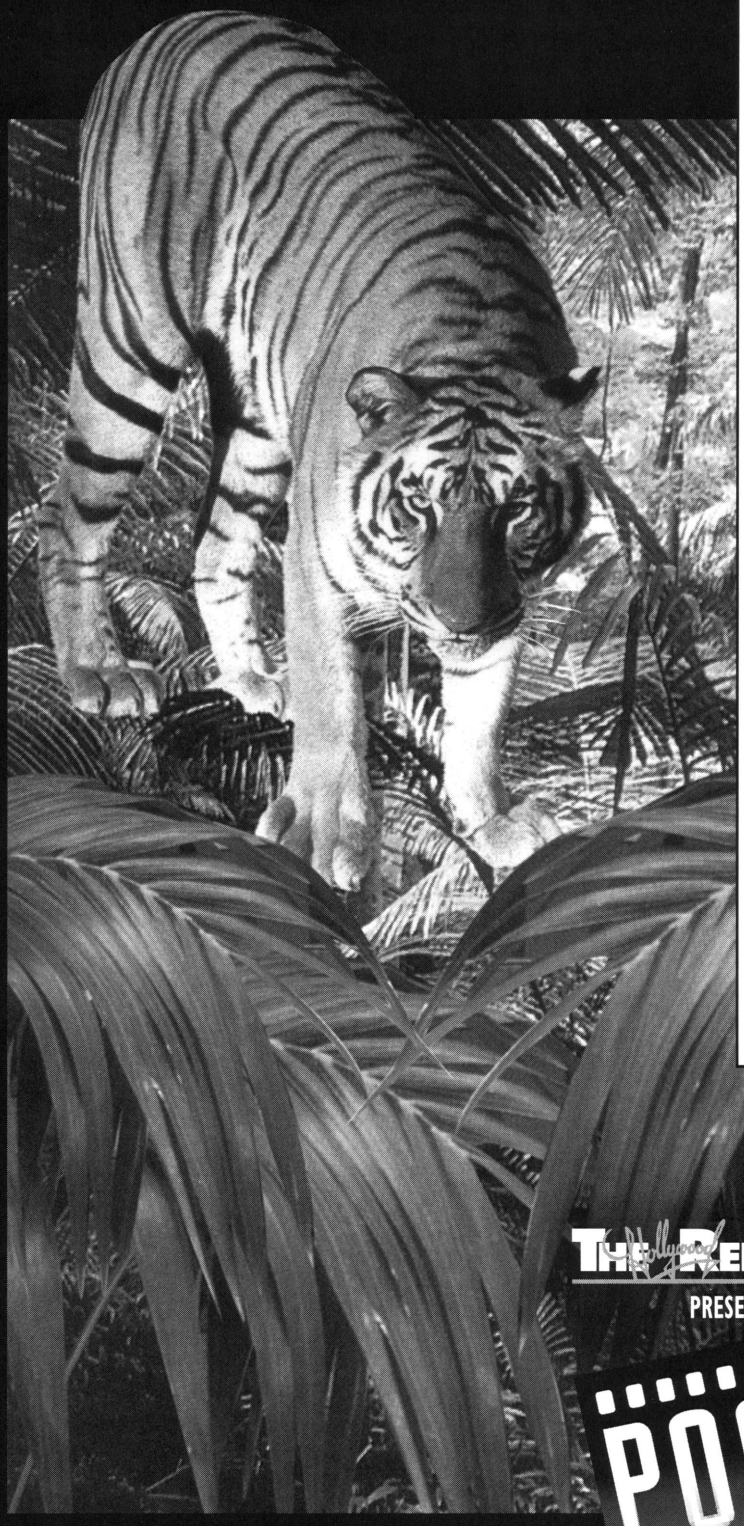

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Hemingway *In Love and War*

Director Richard Attenborough and cinematographer Roger Pratt, BSC mix studio work and authentic locations while filming the epic tale of the famed author's wartime romance.

by Mary Hardesty

During production of *In Love and War*, visitors to the project's Shepperton Studios soundstage were treated to sights more appropriate to a M.A.S.H. unit than a film set — streams of blood; severed arms and maimed legs; nurses handing crimson-soaked medical instruments to surgeons.

The irony of these grisly wartime images is that the picture's Academy Award-winning producer/director Richard Attenborough (*A Bridge Too Far, Cry Freedom, Gandhi*), has always expressed an abhorrence for gratuitous violence and gore. "In my judgment, the pornography of violence is simply dreadful, but this was a true story that took place during World War I, which was one of the bloodiest battles of this century," he explains. "I felt that the violence and blood were necessary to the story, which is about Ernest Hemingway and the love of his life, Red Cross nurse Agnes von Kurowsky. Being thrown together during this dagger-to-bayonet fighting must have heightened all of their emotions. I've discovered that if you cut away so quickly that the audience is almost not sure that they've seen [a violent moment], then what you do show on screen has to have tremendous reality."

Standing next to a large bag of plastic wounds and numerous bottles of prop blood, cinematographer Roger Pratt, BSC concurs. "For the more graphic scenes in the front-line trench, we used a lot of smoke and photographed it from the perspective of

Hemingway, played by Chris O'Donnell. We see what he sees after his trench is hit by a a massive enemy shell. He is knocked unconscious, and when he comes to he sees that those around him have lost their limbs or their lives."

Like *Shadowlands*, Pratt's previous collaboration with Attenborough, *In Love and War* is a tragic love story involving two very different personalities. In this story, however, the female half of the romantic duo, Agnes von Kurowsky (Sandra Bullock) realizes too late how much she truly loves Hemingway.

The bittersweet story came to fascinate Attenborough when he read a copy of the book *Hemingway in Love and War*, by Henry S. Villard and James Nagal. "Like other young Americans, Hemingway was desperate to join in the war that was ravaging Europe," the filmmaker explains. "At the time, America had insufficient troops to send to the Italian front,

so volunteers were sought to help the American Red Cross. When Hemingway arrived in Italy, he was frustrated to discover that he was nowhere near the front line. He soon managed to volunteer his way to the more dangerous front, but the reality of war arrived unexpectedly when the shell landed in the trench he was sharing."

While Hemingway was convalescing, he met Agnes von Kurowksy and Henry Villard, another volunteer who became a close friend. "Everyone was attracted to Agnes," Attenborough relates. "She was also being courted by an Italian surgeon working at the same hospital. Hemingway used the experience of this wartime affair as background for his romantic novel *A Farewell to Arms*. When his fourth marriage floundered in 1961, he shot himself, and they found Agnes' love letters from 42 years before, still in his possession."

Given Attenborough's insistent attention to character and penchant for detail, Pratt was a natural choice to photograph the epic romance. The cameraman is also no stranger to large-scale productions. A product of the London International Film School, he has been a major figure in British cinematography for more than a decade. Pratt has worked for such well-known directors as Neil Jordan (*Mona Lisa*) Tim Burton (*Batman*) and Kenneth Branagh (*Mary Shelley's Frankenstein*). He has also served as Terry Gilliam's regular cinematographer, collaborating with the eccentric visionary on *Brazil*, *The Fisher King* and *Twelve Monkeys* (see *AC* Jan. '96).

Says Attenborough of Pratt, "What is extraordinary about him is that I've never know a cameraman who does the amount of preparation Roger does. The whole script is broken down into sequences using a series of cards, which he keeps with him at all times and refers to when we are discussing style, period, imagery, light, manner, form and so on. My hobby is painting, so composition and imagery are terribly important to me. Roger has absolute integrity in terms of his contribution to a film. He's not just simply lighting the set to the best of his ability. He lights the set for its contribution to the context of that scene within the drama.

"It's those types of things that determine the manner in which Roger starts to paint that picture, and not how beautiful or how romantic he can make it look. That's not to say that those aspects don't impinge on his ultimate decisions, but they are not the genesis. It's all thought out in long discussions between us before production begins. Roger also works very quickly, which was certainly an asset while we were filming on location in Italy."

Pratt worked with art director Stuart Craig (*Gandhi*, *The Mission*, *The English Patient*) and his department to achieve a vintage feel for the film that did not rely on sepia tones. "Stuart did it through choice of locations and design of the sets. On the photography side, we softened and muted the image with Tiffen Pro Mists," explains Pratt.

The cinematographer is also known for his trademark usage of Christian Dior stockings as a diffusion tool. "They work well when the actors are having a bad day and we're doing close-ups. I always like to use a net in back of

Opposite: Red Cross nurse Agnes von Kurowsky (Sandra Bullock) takes in the calm canals of picturesque Venice, Italy during a respite from the horrors of the war-torn countryside. **This page top:** ***With the war ending, 18-year-old Ernest Hemingway (Chris O'Donnell) bids a final adieu to his healer and lover, von Kurowsky. This brief, bittersweet affair became the basis for the writer's romantic novel*** **A Farewell to Arms. Bottom left:** ***Attenborough (standing, in white shirt) surveys a set-up in the trenches with his crew and Pratt (bearded at lower left).***

Above: For the primary battle scenes, Attenborough stressed a visceral, in-your-face aesthetic that would give viewers an unflinching look at the grisly nature of combat in WWI. Right: Hemingway barely escapes obliteration by an enemy grenade. Set on the Italian front lines, this scene was first shot on location near the Piave River; the trench was later re-created at Shepperton Studios to facilitate the filming of scenes with extended dialogue.

the lens and a Pro Mist on the front. I'm afraid of modern film stocks looking like video. If you want a real look, you need to add diffusion."

Pratt relied primarily on Kodak's 5298 for *In Love and War*. He explains, "When you're shooting in high-key exteriors, you always wind up having to put the fast stock on at the end of the day, so I just go with it from the start."

Armed with his stockings and Pro Mists, Pratt confronted the vicissitudes of natural light as he began filming the extended take of the Americans' arrival in a small Italian village, where Hemingway falls in love with von Kurowsky. This setup took most of the day, so Pratt had to allow for the constantly changing light conditions. He remarks, "The light started almost at our backs and moved first to the left and then to the right. It took an awful lot of coordination on the part of each department to pull the scene off. The trick is to always monitor the whole picture. You have to make sure that you manipulate the little bit that will be onscreen to keep it consistent."

Using only augmented natural light to illuminate the scene, Pratt deployed wind machines to blow dust into the frame and bring down the contrast. "I wanted the wind to be whistling down this canyon-like street, making a statement and kicking up a lot of dust," he says.

Pratt reports that his Panavision cameras (a Platinum and a Gold) and Primo lenses (including an 11:1 zoom) stood up incredibly well despite the barrage of dust. "The light in Italy can be very soft and beautiful, but it can also be kind of harsh," notes Pratt, who relied upon Rank Labs in London to provide dailies on a two-day turnaround. "The only way you can get rid of that harshness is to use lots of dust. Fortunately, we never had a down day due to camera equipment failure."

To keep the look of the scene consistent with the remainder of the film's day exteriors, and to create a smoother transition to the stage-shot interiors, Pratt had the parade of actors march under a colonnade before going inside. "It was quite a difficult setup," he says. "It was a bit like doing a shot in New York amid the 'canyons' that are created by the skyscrapers, but on a smaller scale. We bring the band and the Americans down the street to meet the mayor in one take. The only other people left in town to welcome these young, fresh-faced volunteers are children, women and old men."

For the purposes of this particular project, Pratt framed his images in Attenborough's preferred 2.35:1 aspect ratio, shooting in anamorphic. He used a maximum of two cameras on any given scene, save for the battle scenes, which often required up to four cameras. Opines Pratt, "When you're using two cameras and doing interesting shots with the first camera, it's very difficult to get a good shot with the second camera, which is set up to match the first. We usually wound up using a long lens to grab some close-ups. The new Primo 3:1 zoom is superb for that purpose."

During the filming of *Shadowlands*, Pratt acquired plenty of experience shooting with split-field diopters, and he relied heavily on them for *In Love and War* to help compensate for the anamorphic format's shallow depth of field. Notes the cameraman, "If the scenes have a lot of two-shots in them, and you don't want that bouncing-back-and-forth feel, a split diopter is the only thing you can use. It also helped us to take advantage of the enormous chemistry between our lead actors."

Attenborough has a penchant for complex shots, but it was only recently that Pratt was able to convince the director to utilize a video assist. "On *Shadowlands*, he finally capitulated, because I had grown to expect it," recalls Pratt. "Video assist gives the operator and director a communication they'd never had before. I think it also relieves the operator of some of the responsibility in terms of acting, and I think he's probably very

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glad to leave that to the director. Of course, Richard still doesn't watch the video assist during the performance. He always stands by the camera so that he can have direct communication with the actors. He's got a great eye; if something's slipping, he spots it, and I'm always grateful for that."

Attenborough's strong commitment to aesthetic concerns led him to convince executives at New Line Cinema to allow him to shoot at actual Italian locales, as opposed to the intended stand-in locations in Budapest. "I felt we would have constantly had to compromise our shots and would never have gotten the epic scale that, in my opinion, the picture required," he insists.

Fortunately for the production, the Italian government was very cooperative, as were the weather conditions. The second unit was even able to get a few tasteful travelogue scenes that would later be juxtapositioned against the primary battle sequences, which were set against the majestic Dolomite Alps in northeast Italy. Pratt submits, "Our second unit director/cameraman, Arthur Wooster [BSC] was in charge of the battle sequences, which we were going to

American volunteers arrive in a tiny Italian village. To diffuse the harsh sunlight, Pratt used Dior stocking nets and Tiffen Pro Mist filters. When the contrast required further reduction, he used wind machines to scatter dust throughout the landscape.

have to augment heavily with CG. Those scenes were scheduled to be shot on a Monday, Tuesday and Wednesday, so Richard and I traveled to the location on a Sunday and worked out where the main motion-control rig was going to go to be placed. Arthur had very good storyboards from which to work, so his [shots were] quite tied-down for the motion-control part, but he had a lot more creative input when we went to the hand-to-hand combat scenes."

To create the illusion of 13,000 Austrian and Italian troops, 200 American soldiers from a local Air Force base were recruited to spend the day marching in front of the motion-control rig. "Because the first scenes were so far away, we had the computer generate those images, but as the camera got closer, we relied on the soldiers," recounts Pratt. "They spent a day before the shoot marking out sections to make sure people didn't cross where the matte lines would be, so we would get a seamless look when we put it together in post."

The pivotal scenes of Hemingway falling victim to an enemy shell were initially shot at night near the Piave River; the trench was then re-created on a soundstage to facilitate filming of the longer dialogue scenes. Pratt reveals, "We did the aftermath of the explosion in the trench, totally handheld with a net on the back of the lens. I have this wonderful camera operator, Simon Ransley, and he loves to bring the audience right in there. We practically did the whole picture on a 25mm, because it gives you the feeling of being in the scene. When I had to pick things up with a second camera, I would use a 200mm lens."

The exterior night battle sequences proved to be an even greater challenge for the cinematographer, because the Musco Lights that he typically uses were nowhere to be found in Europe. Instead, Pratt had to improvise,

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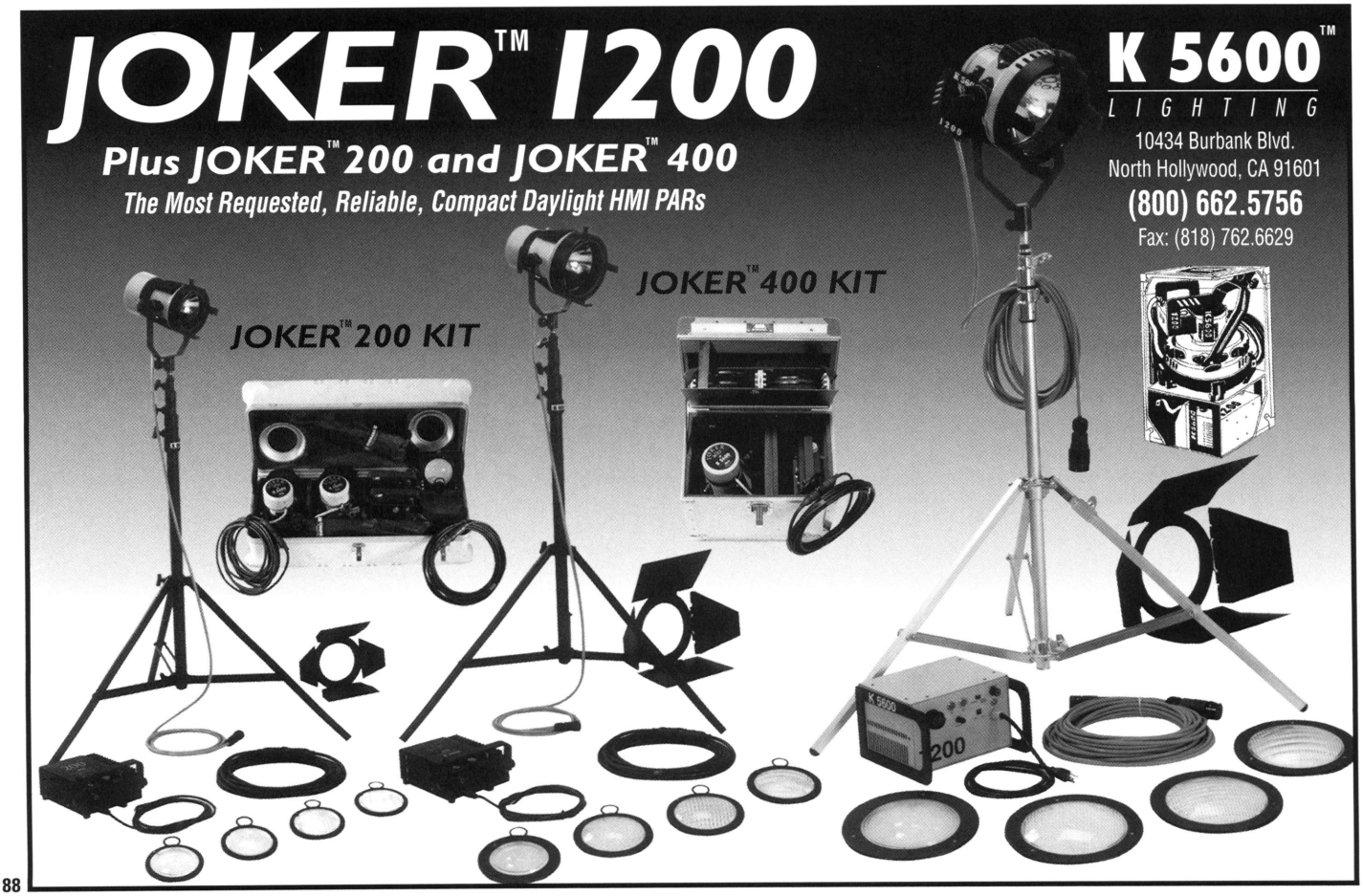
Prepping a shot in one of the historic Venetian locales occupied by the* In Love and War *production. Since the interiors were covered with priceless paintings, Pratt relied upon a Leelium light (a helium-filled balloon outfitted with a 4K tungsten fixture).

using a technique from another war-torn era. "I decided that I wanted to use flares to light the men's faces. Richard had seen them in use during World War II; flares were sent up via rockets and floated down on parachutes, lighting up areas so you could see what the enemy was doing. For a scene in which Chris runs through barbed wire, we had about 10 people shoot flares off sticks. To get a realistic war feeling, the trick is not to have static light, but to always keep your lights moving. It looked a bit funny having all of these people waving lights and running around madly, but the moving light gave the shot a kind of Bruegel feel that we couldn't have achieved with tungsten lights."

Pratt was also keen to have realistic light movement in the M.A.S.H. hospital tent, which was re-created in its entirety on a soundstage at Shepperton. "Richard and I wanted to create a sense of movement and chaos, so we selected hurricane lights as our source lights," explains Pratt. "Obviously, we couldn't use the real things because of the noise and the requirements of the fire marshal, so our gaffer, Alan Martin, rewired the lamps and put little quartz lights inside of them."

Despite having to shoot in a very cramped space with an incredibly low ceiling, Pratt confesses that he immensely enjoyed the experience of shooting in the tent set. "Stuart Craig is one of the best production designers in the world, and he constantly asked for my opinion during the prep stage," he notes. "Obviously, some of the things that were ideal from my standpoint didn't end up being used, but Stuart tried whenever possible. The ceilings on this set were very low, but if you were in a real situation in a M.A.S.H tent, the light would give you hot and cold spots — so in a sense, it made for more realistic lighting. We put a surgeon's mask over Sandra's



face to partially hide it from the harsh light. But since she was in her 'tired makeup' to make it look as if she had been working all night, I didn't have to make sure she looked beautiful."

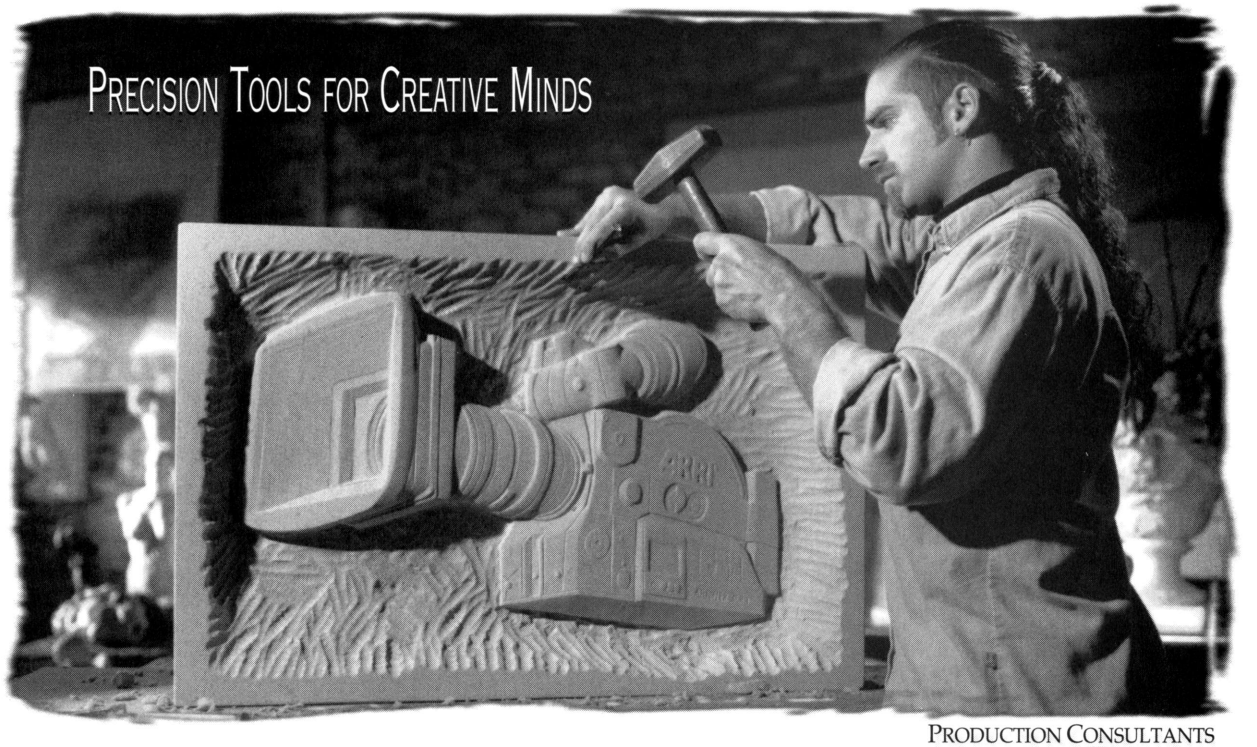
Pratt is most proud of the work he did on a nighttime scene at the Grand Canal in Venice. To convey the feeling of elation brought about by the war's imminent conclusion, Pratt came up with the idea of floating hundreds of candles in the canal; the flickering sources were augmented digitally in postproduction. "I'd seen a photograph in *National Geographic* where the people of Hiroshima were commemorating the dropping of the bomb by placing thousands of candles in boats, so we filled the Grand Canal with candles," he recalls. "It was quite a nerve-wracking evening. We had to block off the Grand Canal and fill up our period gondolas with all of these candles, and it all had to be done at magic hour. The balcony the actors were on was 30 feet above the canal, so we had to stick our giraffe [crane] out through the window and point it back to get a good reverse shot."

The age of many of the historic Venetian buildings left authorities somewhat concerned that the architecture might not be able support of all of Pratt's equipment. "The Italian government made us supply them with the weight of the cameras and equipment down to the last ounce," the cameraman notes. "The only thing mishap occurred when a chandelier fell and delayed us for about half a day."

The fact that the edifices' interior walls were covered with priceless art meant that there was nowhere to hang lighting fixtures. Pratt solved the problem by employing a Leelium light source, a sausage-shaped helium filled balloon fitted with a 4K tungsten light. Pratt also used the Leelium for a banquet scene, hanging a gold curtain around its sides and projecting soft light downwards onto a dark white tablecloth. "The light skirts provided with the Leelium were silver, but I went with gold," says Pratt. "The gold skirts fall about a foot below the light itself and reflect off the faces of the people, so we didn't get that normal immense contrast between a white table cloth and the skin tones. The only other thing we did for that setup was to add a few bits and pieces of lighting for the paintings.

"The palazzo owners were completely paranoid about light levels and temperature inside, and they were absolutely right," he adds. "To get some ambient light, we fired 5Ks into the gold skirt so that the light bounced off the faces and onto the paintings. If something was particularly dull, we put a frame up with a 5K."

Though *In Love and War* was the first feature on which Pratt wielded this helium-balloon light, the cinematographer found it so useful that he plans to take advantage of it on future projects, particularly when dealing with other precious locations built prior to the invention of cinematography. "When you're shooting in historic buildings, the Leelium is the only way to go, and it casts a lovely light," he concludes. "The lighting limitations in historic buildings makes what I do slightly inflexible, but I suppose that's part of the fun of this job, isn't it?" ◆



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Rosewood Probes Racial Violence

Cinematographer Johnny Jensen, ASC helps director John Singleton tell a tale of warring townships in 1920s Florida.

Interview by Bob Fisher

In his youth, Johnny E. Jensen, ASC was fascinated by the America he learned about mainly through films and Western novels. The United States seemed like the end of the rainbow for the future cinematographer, who was born and raised in Copenhagen, Denmark. Jensen might have felt differently had he been acquainted with the dark chapter in U.S. history that he has now helped to re-create in director John Singleton's film *Rosewood*.

The picture recounts events which occurred in 1923 Florida, where two towns, one populated by whites and the other by blacks, clashed in a brutal attack that led to as many as 60 deaths. Produced by Jon Peters for Warner Bros., *Rosewood* features actors Jon Voight, Ving Rhames, Michael Rooker, Esther Rolle, Elise Neal, Don Cheadle, Jaimz Woolvett and Loren Dean.

Given their respective resumés, Singleton *(Boyz N the Hood, Poetic Justice, Higher Learning)* and Jensen *(Rambling Rose, Lost in Yonkers, Grumpy Old Men)* may seem an unlikely pairing at first glance, but the two filmmakers have infused *Rosewood* with a sense of raw urgency, as well as an authentic period ambience.

Jensen emigrated to the United States in 1966 and found work as an auto mechanic. Six to seven months after he arrived, he answered an ad in the *Los Angeles Times* placed by Fouad Said, who was looking for a mechanic to keep the Cinemobile, a mini-studio on wheels, rolling. Jensen advanced from mechanic to assistant cameraman. He subsequently worked with a series of prestigious directors of photography, including Owen Roizman, ASC and the late Jordan Cronenweth, ASC.

Following are excerpts of *American Cinematographer*'s conversation with Jensen about the making of *Rosewood*.

***AC:* How true is *Rosewood* to the actual story?**

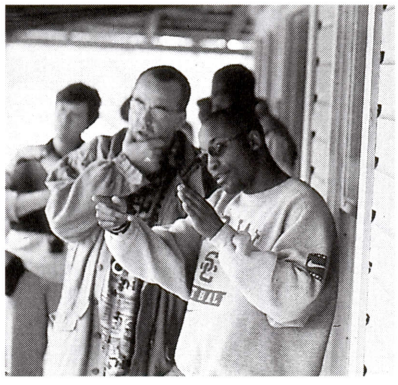
Jensen: I had some initial reservations, because John Singleton wrote a [fictional] heroic character, played by Jon Voight, into the script. In retrospect, he did the

right thing. Instead of making it a dark and gloomy story, he put some movie magic into the script.

Doesn't that distort the sense of history?

Jensen: That's a difficult issue, but on the other hand, if this story was overly dark in content, it probably wouldn't have had the same audience appeal. I don't think the fictional character distorted the story.

The primary lighting motivations for the town of Rosewood were the sun, moon, fire, candles and lanterns — and a sole lightbulb in one set. Jensen (with Singleton, bottom, near left) often added warm light to bring out the performers' skin tones, and force-processed his 500 ASA-rated 5298 stock by one stop.



How did you prepare to shoot *Rosewood*?

Jensen: Production designer Paul Sylbert *[One Flew Over the Cuckoo's Nest, Heaven Can Wait, Rush]* collected volumes of material, and I spent a lot of time just talking to him. I also read a lot of books, looked at many pictures, and visited the town of Rosewood, where the black population had lived. There were a few people who remembered the incident, and others who had heard stories. I also visited Sumner, the town where the whites had lived. In those days, it was a desolate area with a dying sawmill industry. Many people lived at a subsistence level and it was a nurturing ground for trouble. When the incident occurred, the local newspaper printed a small notice about a little riot in which a few people were hurt. Today, some believe that 50 to 60 people were killed.

How did you first meet Singleton?

Jensen: We'd never met each other before my agent arranged a meeting. He's quiet and rather intense, so it was difficult at first to tell what he thought. But at the end of the meeting we had already formed a strong human bond, and I got a knot in my stomach when I read the script. I felt that the story needed to be told. I was also enthusiastic about all of the night work with black actors, with lighting motivated by firelight and lanterns. It was a cinematographer's dream.

What did Singleton know about your work?

Jensen: He had seen some of my films, and especially liked *Rambling Rose*. In that first meeting, he said he didn't want *Rosewood* to be too dark and depressing.

Is he visually-oriented?

Jensen: He's a pure student of film who watches laserdiscs all the time. John referenced pictures going back to D.W. Griffith's *Birth of a Nation*. He'd say things like, "Remember that move they made in *The Professionals* with Lee Marvin standing there? Let's make that move."

Does the audience see the film as participants or observers?

Jensen: The audience basically observes or witnesses what happens during a historical event, although John also uses Jon Voight's character to draw viewers deeper into the story.

Did you use any unusual angles or views?

Jensen: I'm not a big fan of high shots, especially in the anamorphic format, where your horizon line is fairly narrow. But we often made use of cranes, because you basically you couldn't see much of the town from eye level. I actually did some high establishing shots. There was one scene where the town of Sumner goes sort of haywire. I went up to bird's-eye point of view.

Why did you shoot in anamorphic format?

Jensen: John wanted a lot of things happening at the same time, so he used a wider frame. He asked how I felt about Super 35, but I suggested shooting in true anamorphic format. I think you are always better off with a larger

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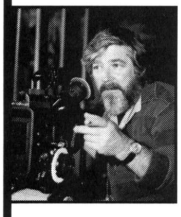

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How did you compose images with the wider frame?

Jensen: I don't think I framed anything in the center. The actors were off-center in the wide screen, and usually there was something interesting happening around the corners of the frame. We also isolated characters once in a while to emphasize a feeling of loneliness; a close-up of a face occasionally occupied 40 percent of the screen. Sometimes there was something else in the rest of the image area, and other times were was nothing to draw the audience's eyes from the face. It depended on the scene.

There are times when Jon Voight's character is feeling the loneliness of being the only white man involved with Rosewood. He questions himself and feels alone. We isolated him on the edge of the frame. During close-ups, I could draw the audience's attention to his face and eyes by having nothing else in the frame, or I could show what he was thinking about by showing them things happening in the background that were relevant to his feelings. You can do that much more with the wider image area.

Which anamorphic lenses did you use?

Jensen: We had one set of Primos and one set of the old C-series lenses. My assistants, Jimmy Jensen and Don Duffield, checked every C-series lens Panavision had, and matched the colors with color-correction gels behind the lens. In dailies, you really couldn't tell the difference.

What were the big technical challenges?

Jensen: There were no electric lights in the town of Rosewood. We also shot a lot of night exteriors in a swamp. The trees and other green foliage soak up light. A lot of those scenes were motivated by firelight. I knew if we shot wide-open, the fire would be overexposed and white instead of orange. You also want more depth of field in anamorphic format, so ideally I wanted to be at stop T4.

Did you actually shoot in Rosewood?

Jensen: We built two 'towns' on 60 acres. They were about a mile and a half apart. Paul [Sylbert] built a sawmill, a lot of small cabins and clapboard homes, a Mason Hall, a church and a sheriff's station. There were no stages. The entire film was done on practical locations, with interiors filmed in very small rooms.

Did you have any input in the set designs?

Jensen: Paul is a stickler for reality. Under normal circumstances I might have fought for more room, wild walls or windows. These are very honest sets, and they kept us from getting too comfortable, but Paul accommodated all of my wishes and requests. We had a great relationship. The picture has a reality-based look, which made it hard to shoot with long lenses in small interiors, but I think we succeeded.

Lens perspective can be subjective. What do you regard as being a wide-angle lens?

Jensen: In anamorphic, anything wider than 50mm. I mainly used 50 and 75mm lenses, which create roughly the perspective that a normal eye would see. We did maybe two shots with a 40mm lens. If you are using a wider-angle lens in anamorphic, the look borders on unreality.

When did you switch between the C-series and Primo lenses?

Jensen: We used the Primos all the time at night, except when we used a Steadicam. We were usually in rough terrain, and we generally used the Steadicam while trying to create a feeling of danger or tension. We used the C-series lenses in those situations because they are physically much smaller and lighter. My camera operator, Scott Sakamoto, also operated the Steadicam.

The locations were just two towns and a swamp?

Jensen: Right, and we used real swamps. It was difficult, because they were snake- and bug-infested, and we had children in many scenes. One night, we had a group of 14 children crossing a little river. We had snake wranglers, but the biggest problem was lighting. You can't use Condors when you are surrounded by water.

How did you motivate your lighting?

Jensen: There was the sun and moon, kerosene lamps and fires. There was one light bulb in the store owned by Jon Voight's character. At one location, I hung a kerosene candelabra that had three kerosene lamps in it. The set decorator basically let us pick and choose where we hung lights, but there weren't that many of them; it's a pretty dark picture that's true to realistic sources, so there are a lot of fires and silhouettes. We played the fires and kerosene lanterns warm because it worked with all of the black skin tones.

Did you have an opportunity to do any testing?

Jensen: I shot one day of makeup and lighting tests, and ended up mainly using Eastman Kodak's 5298 film. It's rated for a 500 exposure index, but I've always rated it at 320 and sometimes at 250. This time I needed to get a 500-speed rating. I asked the lab to force the process not quite a full stop. In essence, we pushed one stop but still rated the film at 500. I got a nice full negative all the way through the answer print without any buildup of grain. Vinny Hogan at Continental Labs in Miami turned out to be terrific. He gave me a lot of personal attention and good dailies.

What film did you use for daylight scenes?

Jensen: Mainly Eastman Kodak's 5287. It has a bit of a softer quality. I had used it on *Three Wishes*, a 1950s period film, and I liked the way it looked in backlight and crosslight. On overcast days, I used Kodak's 5293.

How much of the story was shot at night?

Jensen: Probably 50 percent. I generally worked at 30 to 35 footcandles during night scenes. We were covering 50 acres, and the perimeters of the towns were defined by woods. We were lighting trees that were half a mile in the background, using tungsten light — Dinos with Par 64s. We had three of those mounted on each of seven Condors at night. They were pretty far away. That was part of the reason I couldn't work at T4 most of the time. A lot of times we

Johnny E. Jensen, ASC

and *Rosewood*

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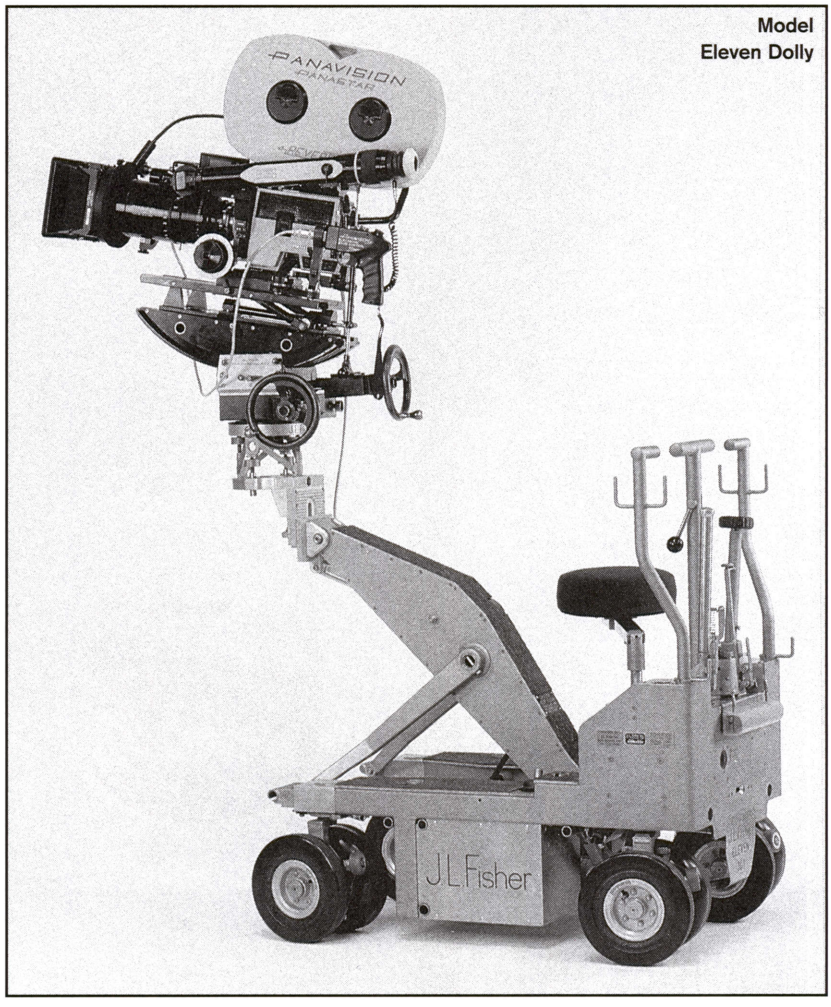

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shot at T2.8, but during the big fire scenes I pulled deeper stops, like a T5.6, because the flames occupied a lot of the picture. We used both real and manufactured fires, which allowed us to burn a house over and over again. We also used special gas and fire boxes that gave us an orange flame.

How did you balance skin tones in those night fire scenes?

Jensen: Some black skin tones soak up light and others reflect it. You can have 10 people in a scene with 10 different skin tones. I ended up mixing hard and diffused light, and picked out people who needed more light. I didn't want it to look artificial. That's why I like soft light. Sunlight is the only hard light in reality. Unless you sit right under a lamp, shadows should be soft.

What kind of camera coverage did you do?

Jensen: I shot a lot with two cameras for the extra coverage. It was never as simple as shooting a master and close-up at the same time. Sometimes, we were just a little tighter with one camera, but basically we were looking for an extra take that gave the editor an edge. It was easier to light day sequences for two cameras; it got a little tougher at night. Today's audiences are more visually literate, even if it's on a subconscious level. They are seeing so many good images on television that you have to really grab their attention. There are basically no rules, so you have to trust your instincts. For example, I used the Steadicam when it seems to be the right look. It was situational and used for many reasons. The B-camera shot was almost always grabbing something from within the A-camera shot. It was sometimes just a small piece of the scene.

How do you deal with actors? Do you try to form relationships, or do you prefer to disappear into the background and hope they forget that you're there?

Jensen: You need to form relationships, because you need their help in many ways. You need them to totally trust and believe in what you're doing. It's an intimate relationship that starts with the

makeup and lighting tests. While testing, you put the keylight in different places so you know if there's a person who needs more light, or who looks better from one side. That's when you discover that a certain character can look meaner in lower keylight from one side. I don't keep any secrets; I ask for the actors' help and rely on their intelligence. I let them in on everything that's happening, so they are willing to trust me.

In your opinion, is cinematography an art or a craft?

Jensen: That's a tough question. I think it's an art, but if you're not a good craftsman, it would be very difficult to be a true artist. Van Gogh's brushstrokes were craftsmanship that allowed him to practice his art.

You had an interesting challenge getting the audience to empathize with individuals whose culture was so different from what we know today.

Jensen: We constantly kept that in mind. We were never too graphic because the events are really horrific in themselves. People were lynched, but we didn't dwell on that. We wanted the audience to ask themselves, 'How can humanity sink to this level?'

Do you think a movie like *Rosewood* can change people's attitudes?

Jensen: I hope so. If we succeed in dramatically portraying a real event which happened but was buried by prejudice for 70 years, adding fictional characters and 'movie magic' flair, I think any audience will walk out with something on their minds, which in turn may manifest itself in their attitudes. *Rosewood* is a story about the human conditions in this country in 1923, and how easily racial prejudice changed and basically erased a small, idyllic Florida town from the map. We show how easy it is to get a lynch mob together. It can be started by a few drinks, and suddenly the momentum is so strong it can't be stopped. Half of the people in the mob probably don't know what they are involved in doing. This film is a story about people who are part of a history that must not be forgotten. ◆

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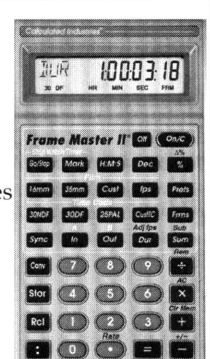

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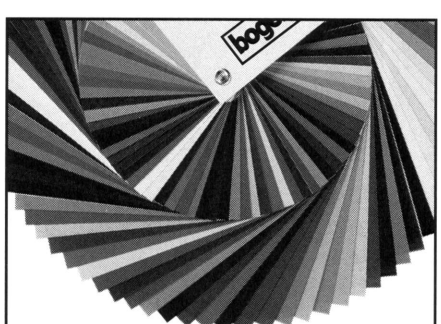

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Sensuous servant girl Maya (Indira Varma) reclines in the Queen's bath as the troubled monarch, Tara (Sarita Choudhury), considers her plight. This image was inspired by an 80-year-old painting of a nude woman rising out of a bath, which Nair and Quinn encountered during a production scout. Says Nair of Maya's ornamentation, "In the nude scenes, I wanted her, or any other woman, to be clad only in jewels [as in the portrait]. It's all my grandmother's jewelry -- if she only knew! She's probably rolling around in her ashes in the Ganges."

Photos courtesy of Trimark Pictures.

The Look of Love

Director Mira Nair and cinematographer Declan Quinn depict 16th-century India as a canvas for the erotic art of *Kama Sutra*.

by Andrew O. Thompson

"*Kama Sutra* was always intended to be an anti-exotic film, not a museum piece on India, or an anthropological journey through my culture and all its glory," says director Mira Nair of her fourth fictional feature, which tells the 16th-century tale of Tara and Maya, two lifelong friends driven into bitter rivalry by jealous antagonism, sexual betrayal and caste conflicts. "I wanted to make a very visceral film about characters and story, which at the same time was an incredible exercise in aesthetics that indulged my tastes in color and primeval things like stone. We had to find that marriage."

Eschewing the exotic for heightened realism was Nair's overriding motive for a film that the Indian-born filmmaker jokingly describes as "an opulent *Salaam Bombay*." The reference harks back to her feature debut, which related the adventures of an 11-year-old lad forced into the life of a street urchin after being abandoned by his parents. Shot in *verité* mode by Sandi Sissel, ASC on the sordid streets of Bombay's red-light district, with an actual cast of homeless children, the $900,000 Hindi-language film went on to earn the Camera d'Or and the Prix du Publique prizes at the 1988 Cannes Film Festival, as well as an Academy Award nomination in the Best Foreign Film category.

Nair's realist aesthetic stems from her background in documentary filmmaking, which she studied as an undergraduate at Harvard University. The director's non-fiction work deals mainly with those cast out of the mainstream of traditional Indian society: her thesis film, *Jama Masid Street Journal* (1979), surveys a traditional Muslim community from the veiled perspective of its females; *So Far from India* (1982) chronicles the isolation between an Indian merchant in Manhattan and his wife, who lives back home; *India Cabaret* (1985), which won the American Film Festival's Best Documentary prize that year, analyzes how female strippers in Bombay position themselves in a society rife with patriarchal double standards; and *Children of a Desired Sex* (1987) pertains to the pressures of aborting a

fetus once amniocentesis determines it to be female.

In *Kama Sutra*, the royal servant Maya (Indira Varma) and the high-born princess Tara (Sarita Choudhury) have been companions since childhood. However, the realities of womanhood cause a rift between the pair. Tara has long been promised to manipulative monarch Raj Singh (*The English*

Patient's Naveen Andrews), but on the night prior to the marriage ceremony, Maya seduces the king with her magnetic sexuality. When her transgression is made public by a jealous admirer, Maya is banished from the royal court.

During her aimless roaming, Maya becomes the obsession of an erotic sculptor, Jai (Ramon Tikaram). Besides carving a stone statue of Maya, he finds her shelter in the compound of Rasa Devi (Rekha), a sensual priestess who is an expert in the erotic arts of the kama sutra. The recently-crowned Tara, meanwhile, has been neglected by her husband, who prefers the pleasures of whores and opium. After Maya masters the kama sutra, she opts to spite the despondent Tara by becoming a royal courtesan. The incessant cat-and-mouse games played by the would-be lovers eventually backfire and cause dire consequences for all four.

Kama Sutra marks Nair's first cinematic visit to her homeland in nearly a decade. The director's previous feature, *The Perez Family* (shot by Stuart Dryburgh), was set in Cuba and Florida, while her sophomore film, the interracial love tale *Mississippi Masala* (Ed Lachman, ASC) took place in Uganda and Greenwood, Mississippi. To re-create the atmosphere of India in the 1500s, Nair and crew headed to Khajuraho, a rocky village located in center of the country, and Amber, a tiny town neighboring Jaipur in the nation's northwestern region.

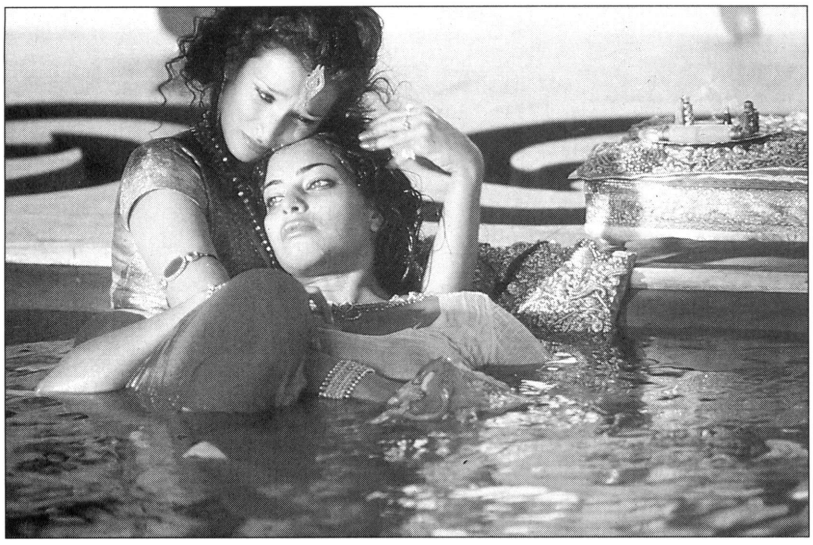
Nair chose cinematographer Declan Quinn to capture these vistas, primarily out of an appreciation for "the classicism of his lighting" in the late Louis Malle's final film, *Vanya on 42nd Street*. Born in Chicago to Irish parents, Quinn was reared in Offaly, Ireland, where, as a teenager, he developed an interest in still photography. Years later, he returned to his birthplace to attend Columbia College Film School.

After graduation, Quinn worked as a news cameraman for an NBC affiliate in Rockford, Illnois, while also serving as an assistant on commercials and industrial films. In 1980, he ventured to Dublin, Ireland, where he landed a job at Windmill Lane Studios. With director Barry Devlin, Quinn shot a number of early videos for the rock band U2, including "Pride (In the Name of Love)" as well as a documentary on the making of their album *The Unforgettable Fire*. He also filmed the independent Irish television pilots *Clash of the Ash* and *Last Catholics*.

In 1985, Quinn relocated to New York City, where he embarked upon a fruitful career shooting music videos for a diverse array of artists, including Iggy Pop, Debbie Harry, Whitney Houston, Van Halen and LL Cool J. In 1991, he garnered a Clio Award for his photography on a spot for MTV's AIDS campaign. Quinn earned his first credit as a feature film cinematographer on *The Kill Off* for director Maggie Greenwald, for whom he later shot the Western *The Ballad of Little Jo*. The cinematographer's other credits include *Blood and Concrete* and, most notably, Mike Figgis' *Leaving Las Vegas* (see Beyond the Frame, *AC* Feb. '96), which earned Best Cinematography honors at last year's Independent Spirit Awards. Quinn recently reteamed with Figgis on the upcoming *One Night Stand*.

Though Nair says that the operatic style of the deceased Sixties Indian filmmaker Guru Dutt, whom she compares to Orson Welles, somewhat influenced the look of *Kama Sutra*, her visuals are drawn mainly from still photography, particularly the images of Weegee, Henri Cartier-Bresson, Werner Bischof, Josef Sudek and various Indian portrait artists. During a preproduction scout in Jaipur, Nair and Quinn encountered an 80-year-old Indian painting of a nude yet bejeweled woman emerging from a bath, which proved inspirational to the duo's color concerns. Recalls Quinn, "What was really striking about it was the concept of using black as a color. There was a blackness around [the woman] that fell

Far left: ***Under the blazing Indian sun, Quinn explains his motivations for an upcoming setup to Nair.*** **Above:** ***The royal procession of Raj Singh navigates the steep incline of the monarch's palace. The setting is located in Amber, a small northwest Indian village famed for its proliferation of medieval castles and fortresses.***



Top right: ***Maya consoles her Queen, who has just attempted suicide by slitting her wrists. Nair wanted the duo to be bathed in an aura of blinding white light indicative of India's extreme daytime heat.*** **Right:** ***Chained to a precarious precipice in the Valley of Stones, erotic sculptor Jai (Ramon Tikaram) shares a final moment with Maya prior to his execution. Nair and Quinn shot this scene from a six-inch-wide ledge while both they and the camera were strapped to the granite rock face with bungee cords.***

off to black in the background, but that wasn't the deepest black. The deepest black was in her hair. The portrait just used different levels of blackness. You hardly ever see that kind of subtle detail in painting, and it offset the color beautifully."

Nair and Quinn agreed early on to film *Kama Sutra* in a contemporary fashion despite its period setting. All-encompassing master shots were to be the exception rather than the rule. The duo found a suitable blueprint for such a style in the camerawork Philippe Rousselot, AFC provided for Patrice Chéreau's 16th-century epic *Queen Margot*. Remarks Quinn, "There are so many epic period dramas that have the big shots, and then cut into [the scene]. We tried to take a different approach by starting with a close shot — not a wide one — and then incorporating the action so that there would still be a lot going on. You still get the depth of the scene, but it doesn't necessarily have to be a master or a wide shot."

Offers Nair, "Part of me was definitely naive about how 'epic' this was going to appear. We had these intimate scenes in the foreground, but in order for them to feel real — the spaces themselves were bloody cavernous — we had to put 25 guys back there with flags, torches, animal handlers and God knows what else. Logistically, that kind of union was sometimes very harrowing."

Though the filmmakers were striving for a sense of realism,

their lighting style on *Kama Sutra* was not limited to a naturalistic approach. The director was adamant about creating an atmosphere that would not rely upon postcard-type shots of the surrounding scenery; Nair impressed upon Quinn that she desired "psychological lighting."

Says the director, "In India, there is a certain kind of blinding white light that happens in the heat of the day; it's almost like shooting into the sun. That's something that I wanted, which Declan really liked. So we have many scenes where he's actually shooting into the sun, or where we create that hot light. The scene in which the Queen slashes her wrists is about the white midway light, and that's what you never see in any films about my part of the world: tropical places. People cushion themselves with dawn and twilight, and that 'let-me-ease-you-into-this-sensuality' [aesthetic], but you have to screw it up because that's what feels real."

Explains Quinn, "We definitely went for natural [illumination], but I wouldn't describe it as naturalistic; it's more 'expressively natural.' Quite often, when you look around in natural lighting situation, it's a bland kind of light that is uninteresting because it doesn't really tell you anything. We always tried to express the emotion of the scene, but also keep it natural. A lot of it *was* artificial, like the moon, which we simulated a few times. There's a scene in which the Raj is on the bed and Maya comes to him that's almost very Hollywood: we pushed the light through a Gobo [template] to create these broken shadows. We started to make it expressive, although it was moonlight, so the final result is a mixture of [stylized photography] and naturalism."

Production designer Mark Freidberg (*The Ballad of Little Jo*, *The Perez Family*) suffused all of *Kama Sutra*'s sets in sumptuous shades; the director says that the hues are coded according to the paintings of 15th-century Bahari masters. A specific shade corresponds to a particular emotional state: red registers lust and love; chartreuse (lime green) conveys springtime and the blossoming of innocent love; blue signifies coldness, particularly for the newly crowned Tara, who finds herself to be a prisoner in her own castle. In contrast, the realm of sculptor Jai and sensual priestess Rasa Devi was composed of basic materials — stone, earth and mud — to reflect their isolation from the world's material concerns.

The strong selection of shades led Quinn to limit his lighting to neutral tones in order to avoid clashing with the sets' preexisting palettes. Says the cinematographer, "In scenes that were predominantly blue, we would bias the light to be warmer on skin and neutral on the walls so that color was maintained. We spent a

good bit of time trying to keep certain hues of light off the walls so that we wouldn't contaminate the [set] colors. Because the colors in this movie are very exact and specific, one of my jobs was to maintain that order. If I wanted the skin to go warm, I would channel the light so that it would hit the actor and not the wall.

"Quite often, I didn't have to gel lights very much because the colors were very specific. My light was pretty pure, either white or just in the natural realm, slightly cool or slightly warm depending on the time of day that I wanted to create. We did mix colors in certain situations: if we had different windows, we sometimes would bring warm light through our main window and a cooler light through, say, a skylight."

Shooting with an Arriflex BL4, the cinematographer utilized Kodak's 5293 and 98 stocks; the latter, he says, "was so fast that it was helpful getting real candlelight at night, rather than making everything fake. [With this stock] you can actually shoot real candles and get enough light off of them to fill a face." (Quinn did effect a 'fire gag' by bouncing light into 12' x 12' frames of red, green and gold metallic cloth; when shaken, the cloth mimicked the kinetic glow of firelight. The cameraman dubbed this technique the "Jimi Hendrix.")

A combination of factors contributed to the fact that the filmmakers couldn't screen dailies: the film's $7 million budget was so thinly spread that it was unaffordable, and the clearance of footage through customs for shipping to and from Technicolor Labs in London (under the auspices of timer John Ensby) could mean a three- to four-week delay before footage could be seen. Nair and Quinn did view four rolls of footage on a Steenbeck before turning to videotaped dailies drawn from an Avid. However, the poor quality of this method led the two to rely solely on their instincts. Notes Quinn succinctly, "[The video dailies] were derived from the negative transferred straight to tape. They looked brighter and had much more shadow detail, but they weren't a true representation of

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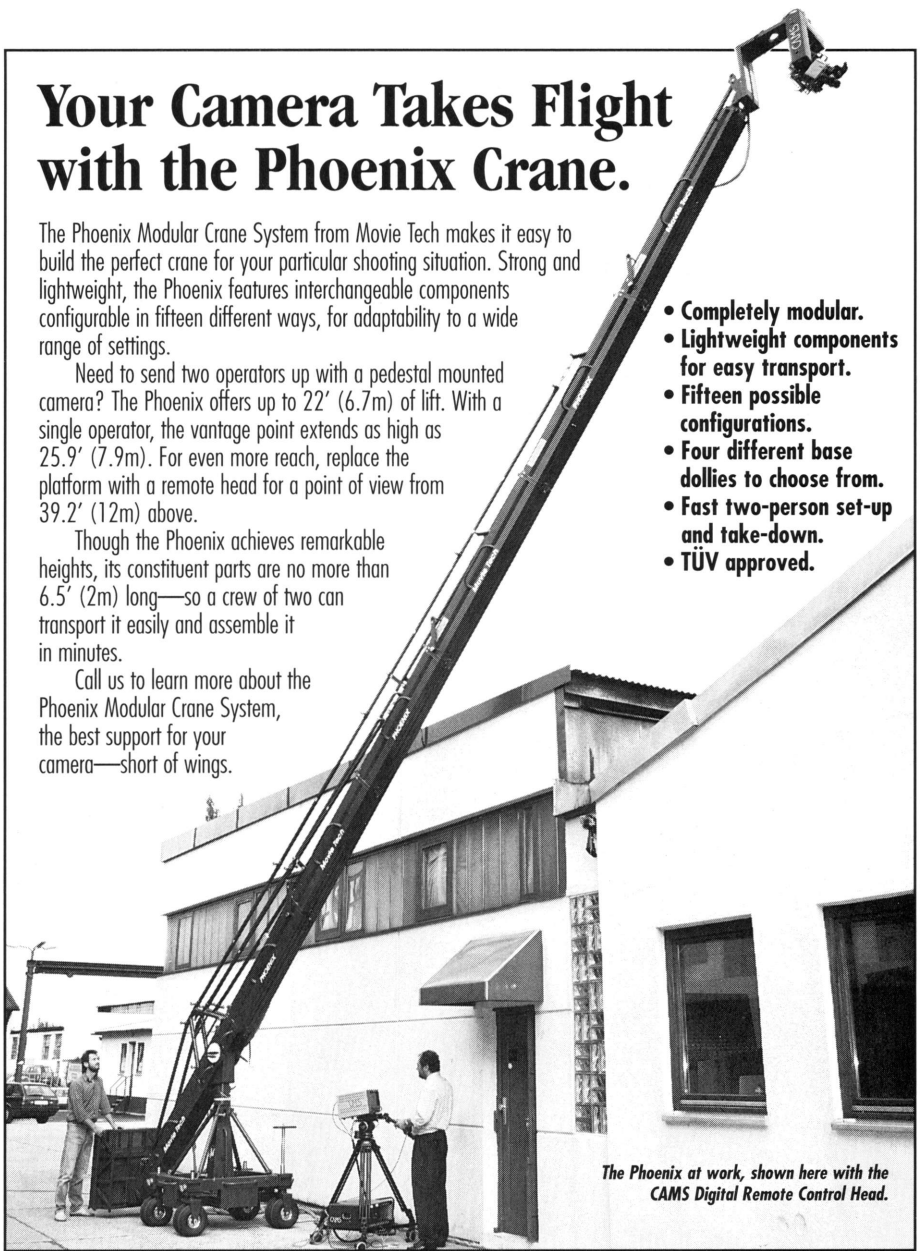

The Phoenix at work, shown here with the CAMS Digital Remote Control Head.

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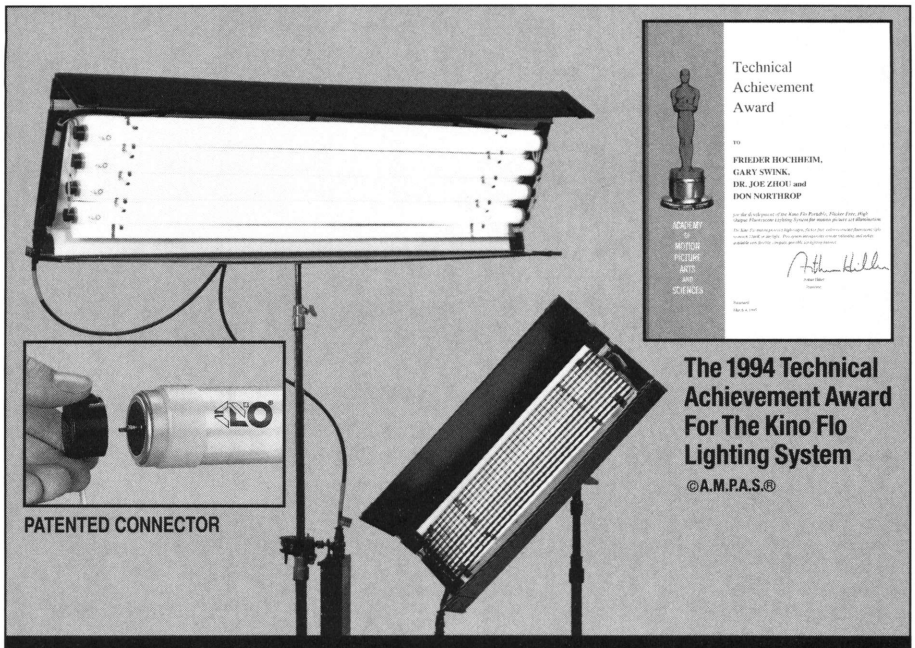

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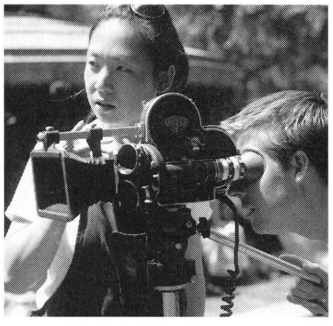

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what we had shot, so I stopped looking at them."

Nair's decision *not* to import her developed footage back into India was also motivated by political considerations. Although her homeland is one of the largest producers of motion pictures in the world, the government has rather strict guidelines about which aspects of Indian society can and cannot be portrayed. Given the high profile that Nair holds in her homeland, she did not want to alert authorities to the nature of her film. During production, the film was entitled *Tara and Maya*, after its two principals, since the implications surrounding the phrase "kama sutra" might have raised the ire of the Indian authorities.

Pointing out the irony of the situation, Nair says, "This film was made as a direct reaction to the sick and perverse way in which sexuality is treated in India, especially on our screens. In the usual Indian film, sex is shown always in a hypocritical and subversive manner — usually through rape and violence, and overtly vulgar romantic songs that are about copulation and not much else.

"I really wanted to counter that, and recall an era when sexuality was not taboo and just part of everyday life. This kind of direct celebration of sexuality can be very easily confused in their minds with pornography, which is certainly the opposite of what it is in our view. So shipping rushes back and forth was impossible because we would have had to deal with the authorities every time."

That Nair's production remained relatively inconspicuous during its 14-week shoot (from September to mid-December 1995) is surprising given the extensive restoration efforts performed on some locations. The children's palace in Khajuraho — an erstwhile hunting lodge owned by a 17th-century Maharajah — was shrouded in soot and infested with bats when first located. Over the course of six weeks, some 500 laborers scraped the black grime off the walls with coconut husks.

After the interior was disinfected, multiple layers of color wash were applied to the walls.

The palatial garden was assembled in piecemeal fashion, with 50 to 60 people carrying individual palm trees (each weighing about the same as a truck) up a rather steep incline. The three-story climb to the palatial entrance proved quite a workout for cast and crew, not to mention the 15 laborers hired to lug the film equipment.

> "This film was made as a direct reaction to the sick and perverse way in which sexuality is treated in India, especially on our screens. In the usual Indian film, sex is shown always in a hypocritical and subversive manner..."
>
> — Mira Nair

The ancient edifices — fortresses for the most part — were not constructed to facilitate Condors and cranes, and did not readily offer mechanisms from which Quinn could hang his fixtures, which included multiple Dinos and Maxi Brutes, as well as a 20K. The cameraman relates, "If we could figure out exactly where the shot was going to be, we would build scaffolding at the edge of frame. But we often didn't have a lot of time to specifically decide the frame until we got to the locations. So we would either have to mount the scaffolding very quickly or find another way to do the shot."

Quinn solved the problem with 8K helium-filled light balloons. For the more extensive night setups — including the wedding ceremony between Tara and Raj Singh — the cameraman floated two of these units (one LTM and one Arri), each of which housed eight open-faced quartz bulbs. Says Quinn, "They were great for those scenes because we needed something high and toppy to give

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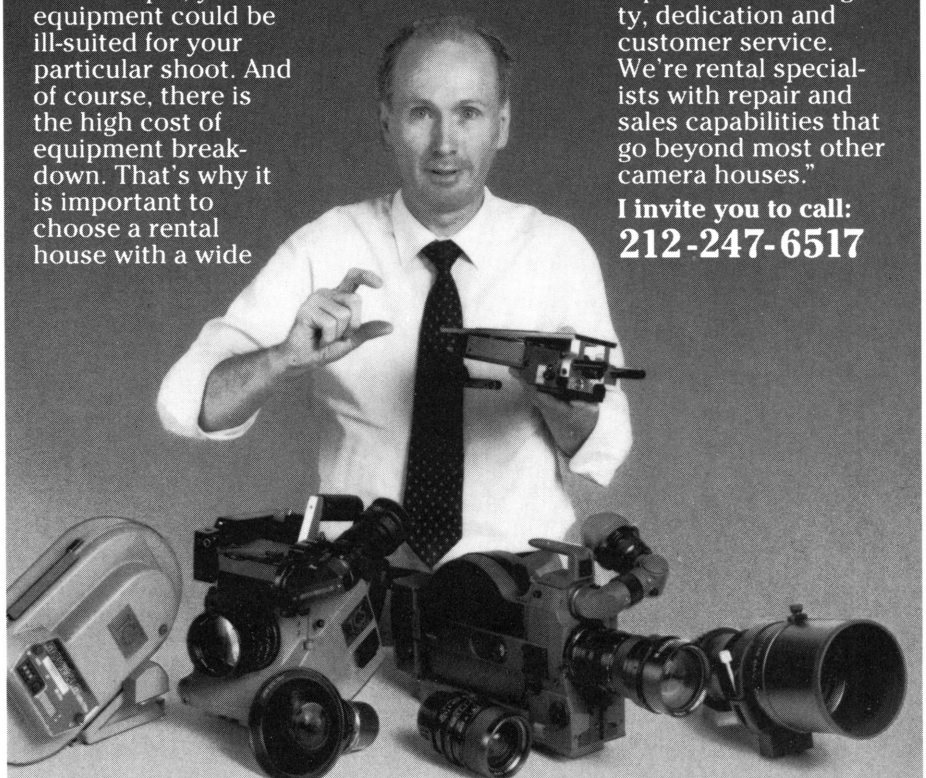

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the place a natural feel. In rural India [the light] was amazing, almost like a sky full of UFOs.

"Bugs would sometimes surround a balloon until it became a little bit like a halo of mosquitoes. There are five times [as many] bugs in India as you'd get in the deepest South in the States. If you didn't beat them off they would opaque [the light] within five to 10 minutes. We could smell them burning as they hit the gels. These are the things you don't anticipate."

Khjajuraho was also the site of the black rock waterfalls where Jai languishes in chains prior to his execution beneath the crushing weight of an elephant's gargantuan foot. In terms of sheer danger, Nair and Quinn both cite the scene in which Maya makes a final visit to her shackled lover as the most adrenaline-raising aspect of the shoot. Recalls Nair, "Declan and I were on a six-inch rock ledge with a handheld camera that we bungeed off from some rocks above when we could. We were also strapped to the rock with bungees so that we could move a little bit. I wish someone had taken picture of us! At the point where Maya was supposed to approach Jai, it was an 80-foot drop to get to that ledge and an 80-foot drop if we missed. Plus, there was gushing, torrential water below!"

At Nair's insistence, most of the crew members employed on the production were from India. For more extensive setups, their ranks grew to 300. The director did bring along 20 workers from the United States in order to smooth the transition between the Indian and American methods of moviemaking. Explains the director, "Unlike all of the foreign co-productions that come to the country, I have a bee in my bonnet about shipping the whole Western world to India. I really have a belief in our filmmaking resources, even though the standards of excellence are different. And, the Indian crew worked with such pride because they were creating pieces of our culture. We would joke and call the wrestling ring [at the Raj's palace, which is filled with different shades of sand] 'tantric pizza.' People got high on bringing that old time Indian aesthetic to life."

Despite the obstacles created by shooting *Kama Sutra* in India, Nair relished the opportunity to infuse the film with moments that feel truly authentic. She explains, "For me, India is a very charged engagement on all levels, so it really inspires. For instance, we constructed the scene when Maya is bathing in the lake. But we saw the same scene [acted out for real] every night and morning in that same lake. So in a sense, it was almost a documentary situation. We used that method a lot. When Maya walked away from the palace after being expelled, I threw in 13 peasant kids rushing around just because that's what life in India is like. Along similar lines, animals in India [roam freely] everywhere; there are no barriers. We had goats, buffaloes and peacocks [running in frame]. The music of that — the sound that happens when you put all these elements together — is what India is like today, and what I imagine it might have been like in the 16th Century. Those elements make things come alive and feel real, and I find that sort of tactile universe very erotic." ◆

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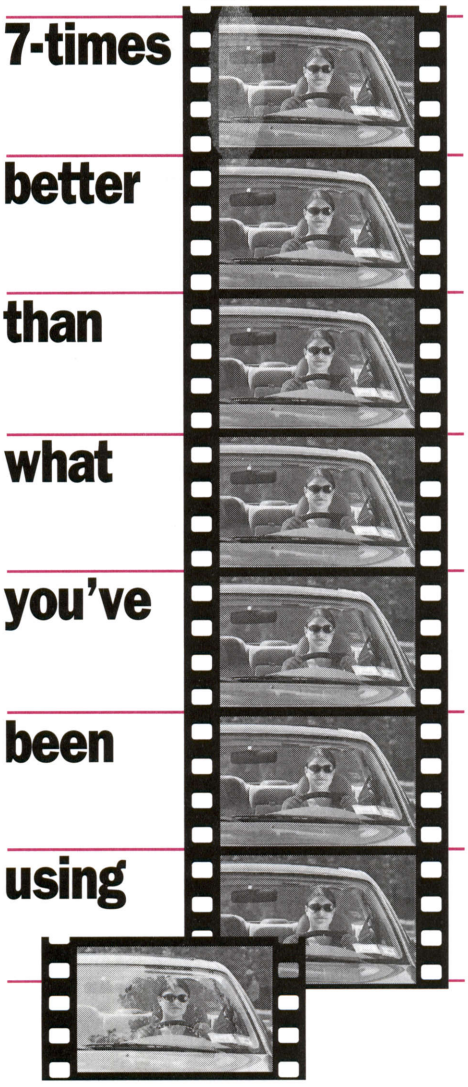

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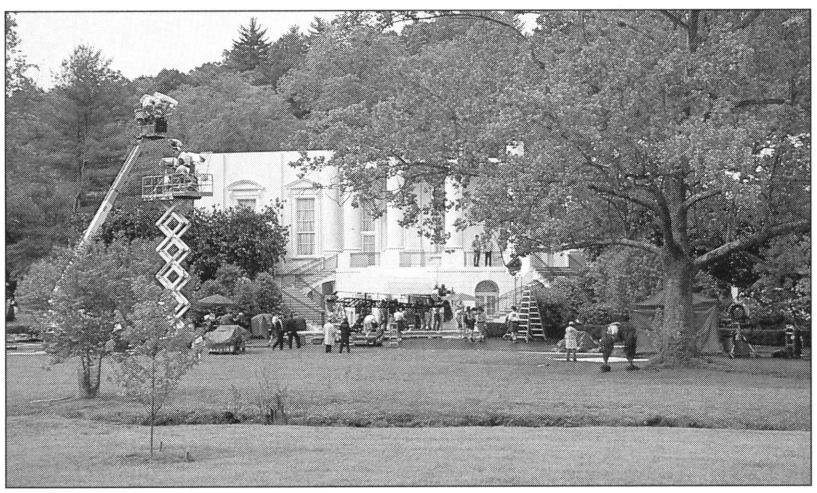
One State Fits All

Filmmakers have found western North Carolina to be a burgeoning location that offers a wide range of natural resources and professional services.

by Lynda McDaniel

Mountains define the very way of life in western North Carolina. Ancient ranges — named Blue Ridge and Black, Great Smoky and Snowbird — rise and fall in breathtaking patterns all across a 23-county expanse. The rugged terrain of the majestic landscape demands resourcefulness and self-reliance from its inhabitants. With an expansive growth of lush vegetation (lists of flora read like an Audubon field guide), the area is bathed in an ambience of diffused, natural light. Eventually, the mountains submerge into riverbeds and wide valleys, giving way to landscapes similar to those found in New England, the Mid-Atlantic or Pacific Northwest. All of this positions western North Carolina as a strong partner in the state's filmmaking industry, which consistently ranks in the top five nationwide.

Movies have been filmed in this region from as early as 1921, and some 320 films having been shot there since 1980. Of the 10 major features filmed in the area in the past five years, the most recent is *Digging to China*, directed by Timothy Hutton and starring Kevin Bacon and Mary Stuart Masterson.



Top: ***Downtown Asheville provides a backdrop for a parade sequence in*** **My Fellow Americans** ***while the Biltmore Estates*** **(bottom)** ***have offered palatial charm to several productions.***

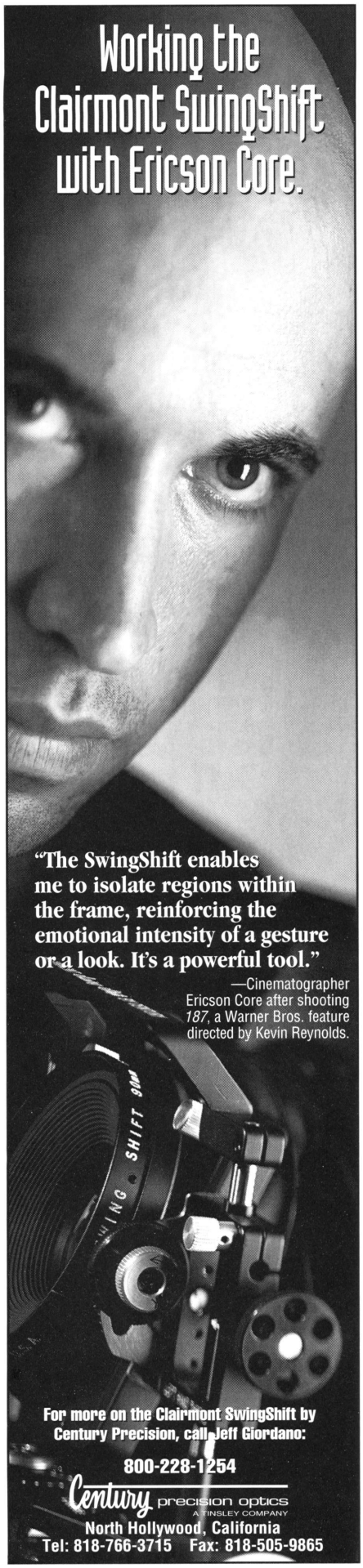
Photos by Tim Barnwell and Sandra Stambaugh, courtesy the Asheville?Buncombe Co., NC Tourism Development Authority.

That film's location manager, Lance Holland, is a veteran of such other western North Carolina-shot features as *The Last of the Mohicans*, *The Fugitive*, *Nell*, *The Journey of August King*, and *My Fellow Americans*. Holland has personally witnessed the increased respect the region has earned. "*The Last of the Mohicans* really showed the industry a number of things about this area," Holland states. "For one, it's obvious we've got the locations — not just pristine mountains, but picturesque little towns, old schools, and a railroad you can wreck a train on."

The region also boasts a 250-mile stretch of the renowned Blue Ridge Parkway, which winds through forests and pastures, and past rocky cliffs and raging rivers. Also dotting the landscape are hundreds of waterfalls, miles of white water, small rural towns, bustling urban centers, the Cherokee Indian Reservation and historic pioneer homesteads, eight winter ski resorts, 60 summer camps, Italian-style frescoes and even a French chateau.

"The region is very diverse," states Michael Ewing, co-producer of *My Fellow Americans*, a recent feature project directed by Peter Segal and starring Jack Lemmon, James Garner and Dan Aykroyd. "Our movie takes place over a whole cross section of states — North Carolina, Ohio, Pennsylvania, Virginia — and western North Carolina doubled for all of those states."

In fact, so many distinct locations abound that the WNC



Film Commission is continually updating its computerized photo file (Warner Bros. Classification System). "We're definitely more than pretty scenery," states Patricia Cabe, an official with Advantage West, the parent organization for the Asheville-based WNC Film Commission. "We've got industrial buildings, period towns and plenty of backlot looks."

Conveniently located adjacent to the Asheville Regional Airport, the WNC Film Commission offers numerous benefits to immigrating productions. "We're an easy contact in the community," Cabe continues. "We have an infrastructure in place that can lead folks through the red tape of the permit process. We are familiar with public officials who can make things happen. We read scripts and break them down to see if we have a look that might match a location. And, we have a certified film commissioner, Mary Nell Webb, who is trained to assist producers and location scouts."

The WNC Film Commission is linked with the North Carolina Film Commission in Raleigh and regional commissions throughout the state as a collective provider of services and resources. For example, rather than having one or two location scouts under their full-time employ, the commission opts to hire freelance location managers, each of whom is well-versed in a specific terrain. Says Holland, "That [procedure] serves the producers much better, and is much more economical and efficient. If we get a call in the morning, we can have photos on the way in the afternoon."

Despite the diversity of the locations, the quality of the area's natural light remains a constant. So notes Jorgen Persson (*The Best Intentions, House of the Spirits*), the director of photography on *Digging to China*. "Your morning fogs are fantastic," he submits. "We started very early in the morning and only had to wait 30 minutes for the right light and the right mists. When the sun shines through the mist it looks incredible. The evening light with the sunset, when the very low sun comes through on a meadow, is also fantastic."

Julio Macat (*Home Alone, Moonlight and Valentino*) the cinematographer on *My Fellow Americans*, found the region's ever-changing weather interesting to work with — and sometimes around. "Because the weather changes so much, it gives you an opportunity to have more variety in the look. When you are shooting beauty shots or establishing shots, the quality of the light changes quickly, and you can achieve different looks in a shorter period of time. Also, the thunderstorms are spectacular."

Given the region's rural, remote nature, many may be surprised that western North Carolina is accessible to modern equipment sources and savvy, experienced crew members. States location manager Holland, "There are other areas of the country that are famous for their pristine wilderness locations, but they are a thousand miles from rental equipment. We're just three hours from Charlotte and Atlanta, where we can get specific film packages, grip packages, camera packages, electric packages, honeywagons, star trailers, caterers, you name it. Paramount in Charlotte and Lightning Rentals in Atlanta and Charlotte have everything you need to make a movie."

An entire infrastructure is now in place, with 29 statewide soundstages waiting to welcome skilled technicians, work crews and talent. Western North Carolina may be thousands of miles from Hollywood, but a cadre of professional actors, choreographers, costumers and eager extras are within close range. "The area has amazingly diverse talent, from crew people to actors in the movie," says *My Fellow Americans* co-producer Ewing. "Pete Segal, the director, auditioned right there in Asheville. We had 88 speaking roles in the movie, and I would say well over 50 percent were filled by local people. They are some of the best actors in the movie."

The local residents, however, are not known for being starstruck. Mountain people are proud, private folks whose native reserve precludes them from

crowding the sets or causing problems. Yet the populace is unabashedly grateful for the boost to an economy limited by both the ridged terrain and the predominance of public land. Western North Carolina's portion of statewide film revenues — $357 million in 1994 and $391 million in 1995 — is so welcome that local officials go out of their way to reduce the maze of bureaucratic red tape, and newspapers write editorials extolling the benefits of filmmaking.

A test of that communal cooperation came last year when the parade scene in *My Fellow Americans,* shot in downtown Asheville, cut shop owners off from their customers for an entire day. But by the day's end, requests for actors' autographs outnumbered merchants' complaints; this was partly due to the fact that Ewing's team kept communications open, and also made a contribution to an organization that oversees the downtown sector. "That was a very good move for them to make," offers Mark Fields, owner of A Far Away Place, an indigenous art and gift shop situated along the parade route. "In any case, a movie that films in the city generates an air of excitement among the merchants and everyone else. Many of the people involved in the filming became clients of mine."

Of course, one requires much more than a demeanor of bonhomie to shoot a film, which is why skilled local crews continue to make themselves available. Danny Miller, art department coordinator for *Digging to China,* is a partner in the Asheville-based Ironwood Productions, which serves as a statewide resource for locating technical crews and equipment. He says that productions coming to the region might be wise to consider tapping native expertise, rather than transporting crews all the way from Hollywood. In the case of *Digging to China,* the producers brought the majority of their crew members from Los Angeles, and didn't contact Miller until there were only six crew slots left to fill. He notes, "There are easier ways to put a film together [on location], especially when [producers] can

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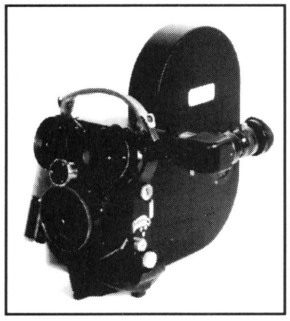

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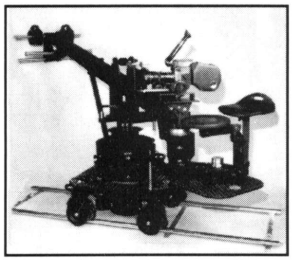

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In addition, Ironwood facilitates filmmakers by making its editing facilities available during production and postproduction. "Some directors want to edit while they are shooting," he says, "so we give them access to our Avid and Media 100 equipment. It fits easily in a motor home for on-site editing."

Miller and his partner, Kurt Mann, share 30 years' worth of independent filmmaking experience, and also produce electronic press kits that they beam to news networks all over the world. The *Digging to China* production saved the expense of importing a publicity crew by hiring Ironwood to shoot complete interviews of Timothy Hutton, Kevin Bacon and the film's other major players.

The mountains have spawned a strong tourism industry that yields other benefits for moviemaking, such as abundant housing and shopping. "This is a very economical area to shoot in," comments Holland. "Accommodations can be had at a very reasonable rate, even in Asheville. If you're not in the high season (the second week in June through to Labor Day, and weekends in October), you can get incredible deals on lodging the rest of the time. Thousands of rooms are vacant. The crew for *Nell* stayed at Fontana Village, where there are 265 rental cabins and a 100-room hotel." Holland adds that longer driving distances to hardware and supply stores in these more remote locations pose little problem; after all, 35 miles in the country can take less time to drive than five miles in the city.

Of course, shopping is to tourism what groupies are to stars — one follows the other. Due to its thriving tourism, western North Carolina offers miles and miles of prop stores, as well as antique, curio and junk shops. Miller reports that 90 percent of the props for the 1969 period sets of *Digging to China* were purchased within a 40-mile radius. The $100,000 spent locally not only proved to be cheaper than utilizing a prop house in L.A., but helped the production cement a stronger relationship with the local community. The film's prop master, Richard Wester, adds that the props were often of better quality. "A lot of the stuff from New York or L.A. has already been shot to death, and it's not in good shape," he points out. "As a last resort, I can always go back there for the hard-to-find things."

North Carolina offers motion picture production companies a cap of one percent on sales-and-use tax purchases, or rentals, of items used in the making of films in the state. Another of North Carolina's advantages is its "right-to-work" status, which gives filmmakers three shooting options: union, non-union or a combination of the two. Says Alan Mrukva, producer of *Digging to China*, "The original script called for New Hampshire, but we wanted to do this movie as a low-budget, independent film, so we came to North Carolina [and took advantage of its status] as a right-to-work state. It was a great experience."

The mountains have even fostered manmade sites that have been beneficial to filmmakers. At the turn of the 19th Century, the abundant peaks prompted George Vanderbilt (grandson of railroad and shipping tycoon Cornelius Vanderbilt) to set up housekeeping in a 250-room castle he had constructed in the style of a 16th-century French chateau. Today, Biltmore Estate is the largest private residence in America, featuring 8,000 acres of formal gardens, rolling farmland, lakes, streams, vineyards and forests that have served as the site for nine feature films and dozens of commercials. Every production company to utilize these grounds receives personalized attention from a representative of the Estate's Special Projects

department.

With 10 miles of paved, unmarked roads winding through forests and countryside, the Estate is a favorite of corporations such as General Motors, Ford, Chrysler and Mazda, among others. In fact, the entire region is an increasingly popular destination for commercials, including last year's venture into the international marketplace with the Dutch-based company Unox Soup.

All film-related moneys generated on the Estate are earmarked toward its preservation, which often requires vocations virtually extinct in this country. To fill this need, Biltmore officials joined forces with educators and industrialists to study British methods of training top-quality decorative painters. Following consultations with the City and Guilds of London Institute, the first (and only) European-style decorative painting program in America was established in 1988 at the Asheville-Buncombe Technical Community College. Instruction is given in such subjects as gilding, marbleizing, wood-graining, wall-glazing, ornamental plaster, painted decoration and advanced stenciling. Many graduates of the program remain in the region to offer their services to both restoration projects and the film industry.

The skills that originated in the region are a direct result of needs brought about by the harsh mountain terrain. During the 18th and 19th Centuries, isolated Native American and European settlers had to rely on nature: their artisans transformed rivercane into baskets, clay into vessels and native hardwoods into musical instruments and furniture. The tradition of fine craftsmanship continues, offering filmmakers an easy means of acquiring specialty props for specific periods.

On *The Last of the Mohicans*, director Michael Mann demanded authenticity down to the finest details, and solicited local artisans to craft period props like huge clay vessels, specialized knives and Native American beadwork. Asheville-based HandMade in America functions as a clearing house for hundreds of these craft

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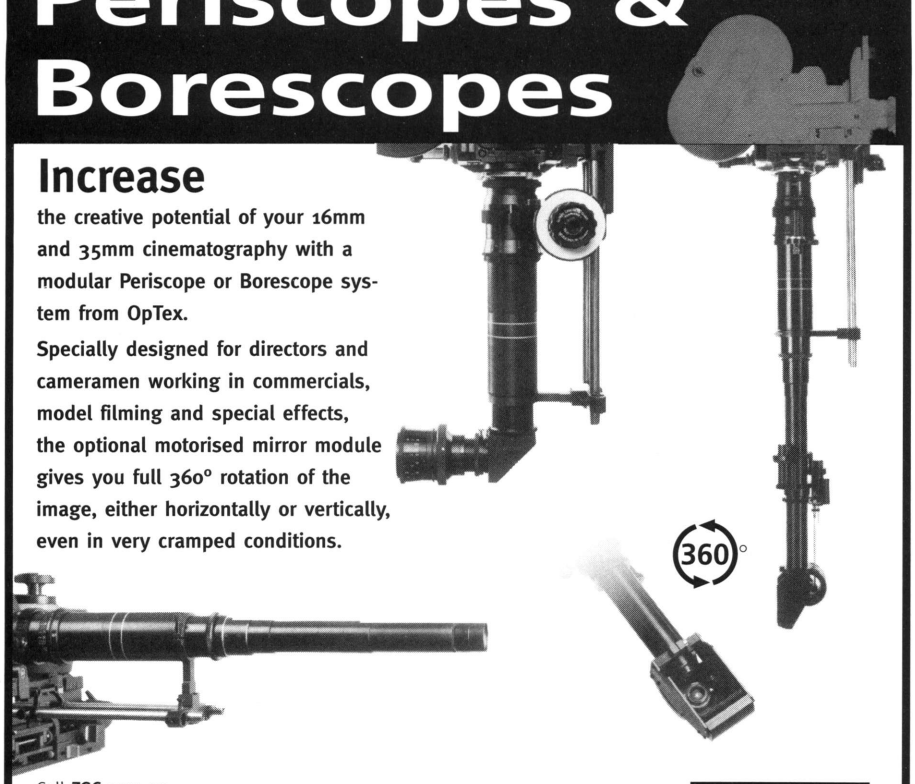

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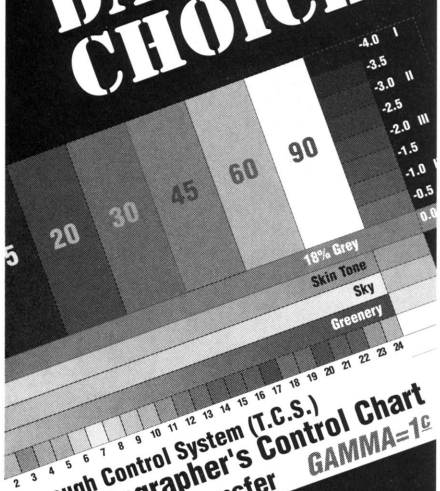

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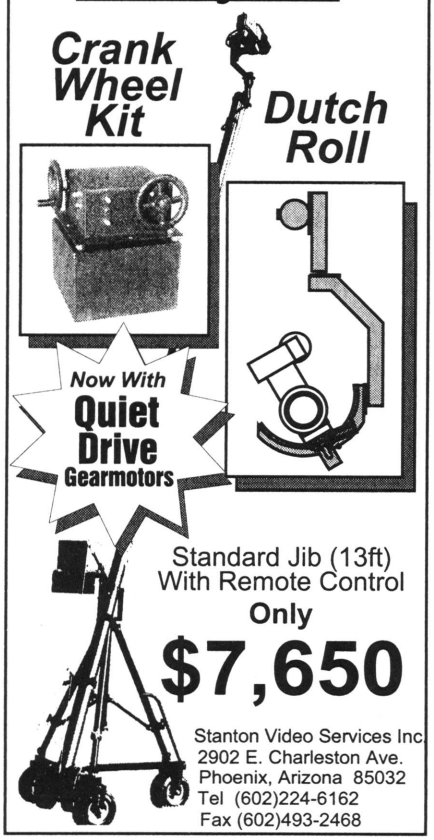

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artists. HandMade's director, Becky Anderson, explains, "We offer a registry of all craftspeople in western North Carolina who make items for periods ranging from Colonial and Frontier to Contemporary. The registry includes their skills, the objects they can make and their mediums. We can locate craftspeople all over the region, county by county."

Given the thousands of square miles canvassed by the various mountain ranges in western North Carolina, rarely are residents jaded by yet another film being shot in their area. Rather, communities are becoming more eager as they learn what to expect. In return for an economic influx, the townspeople lend their hard-earned integrity and resourcefulness to each and every film.

Concludes producer Ewing, "We wanted the location to stand for America. We thought about shooting in Canada, in upstate California and outside of Chicago. When we looked at North Carolina, we knew instantly that it was the perfect place. As a result, *My Fellow Americans* reflects the gentility of both the countryside and the people." ◆

RESOURCE LISTINGS

The WNC Film Commission's Resource Guide Book is available at WNC Film Commission, AdvantageWest, PO Box 1258, Arden, NC 28704; telephone: (704) 687-7234; fax: (704) 687- 7552; e-mail: WNCREDC(Pat)@ioa.com; Internet: http://www.haywood.cc.nc.us/wncedc.

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The World on a Shoestring

Despite a modest budget, filmmakers turned *Around the World in 80 Days* into an entertaining and Oscar-worthy spectacle.

by Frederick C. Szebin

The year 1956 offered an inordinate number of epic movies. One of them, *Around the World in 80 Days*, bested *Giant*, *The King and I* and *The Ten Commandments* to win five Academy Awards, including those for Best Picture and Best Color Cinematography (Lionel Lindon, ASC).

In Jules Verne's 1872 novel of the same name, Phileas Fogg accepts a wager to travel around the world in the proscribed time, relying on his wits and his new manservant, Passepartout. Unbeknownst to Fogg, he has been fingered as the daring thief who plundered the Bank of London. Tailed by Detective Fix, who eventually becomes involved in his quarry's adventures, Fogg overcomes jungles, Indians, and his time limit — and even makes the acquaintance of Aouda, a genuine Indian princess who becomes his wife.

The concept for the film version began with Michael Todd, a stage producer who had shepherded such popular hits as *Streets of Paris*, *Star and Garter* and *Something for the Boys*. In the 1950s, however, Todd suffered a losing streak of flop shows and bad business decisions.

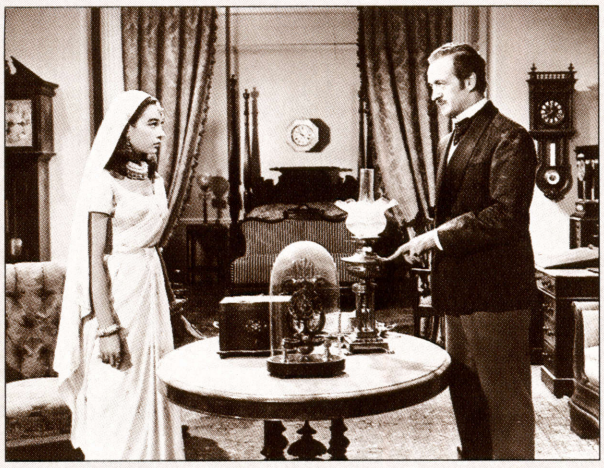
According to Art Cohn's biography, *The Nine Lives of Michael Todd*, the producer had intended to stage his comeback with a film version of Rodgers and Hammerstein's *Oklahoma*. His plan was to use the film to showcase his new 70mm filming process, Todd-AO.

Devised to compete with CinemaScope, Todd-AO was the brainchild of Dr. Brian O'Brien, director of the Institute of Optics at the University of Rochester. Armed with a $20 million investment and a team of 150 researchers, O'Brien faced a six-month deadline imposed by Todd. While on leave to fill the position of vice president in charge of research for the American Optical Company, O'Brien developed the cumbersome camera and Bug Eye lens that gave viewers an unprecedented peripheral view on a giant curved screen.

Todd grudgingly acknowledged American Optical's input by allowing their letters to grace the invention's name. The Todd-AO process did help make *Oklahoma* an American classic of the stage *and* screen — but only after the producer had been forced off the project.

Bankrupt and dejected, Todd persuaded Sir Alexander Korda to buy his motion picture rights to *Richard III*. While at Korda's office, the producer randomly picked up the script for *Around the World in 80 Days*, which had proved impractically expensive. But the story presented a personal challenge for Todd, who had backed a failed 1946 stage version of *80 Days* starring Orson Welles. Compelled to retry Verne's globetrotting tale, he struck a deal in which the England-based production would be made with Korda receiving 10%. Korda eventually sold his end back to Todd for $100,000. Columbia Pictures was originally slated to put up 75% of the budget, but studio mogul Harry Cohn halted the deal, forcing Todd to beg and borrow enough to get the film going; the entrepreneur spent much of the production time finding additional funds. United Artist backers Bankers Trust viewed rough footage and chipped in $500,000, but the film's

Niven and Cantinflas in the hot-air balloon. The Mexican comedian did his own stunt work in the sequence.



An Indian princess, (Shirley MacLaine), meets Fogg, (David Niven).

payroll was a constant problem until the very end of the shoot.

Todd hired actor David Niven, the embodiment of suave urbanity, to play the imperturbable Phileas Fogg. Cantinflas (a.k.a. Mario Moreno), the famed Mexican clown, acrobat, bullfighter and actor, agreed to play Passepartout, even though he had previously refused to do an American film. Niven recommended old friend Robert Newton for the role of Detective Fix. Newton was given the role despite the alcoholism which would claim his life in 1956.

During the search for an actress to portray Aouda, Todd had seen a picture of Miss Ceylon in the 1955 Miss Universe Contest at Long Beach. He asked her to visit his RKO office, but her scheduled screen test conflicted with a hair appointment. Todd instead found a then-unknown dancer named Shirley MacLaine and signed her for her "pixieish, whimsical quality."

Todd then proceeded to pull off his biggest coup through sheer fast-talk and charm, casting 50 bit parts with the greatest stars of the day. The staggering list of top talent called onto location — or to one of the 11 stages used to make the picture — included Noel Coward, John Gielgud, Trevor Howard, Robert Morley, John Mills, Beatrice Lilie, Hermoine Gingold, Hermoine Baddeley, Glynis Johns, Ronald Colman, Charles Boyer, John Carradine, Marlene Dietrich, Frank Sinatra, George Raft, Red Skelton, Victor McLaglen, Andy Devine, Joe E. Brown, Cedric Hardwicke and Buster Keaton.

In keeping with the grand scale of the project, Todd planned to showcase the work of international filmmaking greats. British scenes were to be directed by a British director, American sequences by an American director, and so on.

Director John Farrow (*Wake Island* and *The Big Clock*) co-wrote the screenplay with James Poe and New Yorker humorist S.J. Perelman. However, after filming two days' worth of shooting for the bullfight sequence in Spain, Farrow was fired. Todd even attempted to have his and Poe's names removed from the film's credits, but the Writer's Guild wouldn't allow it.

As a result of these imbroglios, Todd was forced to cast about for a new director. In the 1950s, young Michael Anderson was in the vanguard of a new British cinema that had rebuilt itself after the devastation of World War II. A former assistant to David Lean, Carol Reed and Anthony Asquith, Anderson had found his initial fame as director of *The Dam Busters*. He had just finished directing *1984* when he was contacted by Todd.

"I was on holiday when I got a call asking me to go up to London and meet a Mr. Todd at the Dorchester Hotel," Anderson recalls. "I went in and the suite was packed with people. When I got there, I said to the assistant, 'Michael Anderson to see Mr. Todd,' and he said, '*Everybody* is here to see Mr. Todd.' I waited and suddenly a voice boomed out, 'Is Michael Anderson here?' I said, 'Yes!' He said, 'Everybody else get out!' People vanished very quickly, and I found myself face to face with a gentleman wearing a zebra-striped dressing gown and smoking a huge cigar. He looked at me and said, 'If you were traveling through the streets of Chelsea on a penny farthing bicycle, where would you put the camera?' I said, 'On the handlebars.' He said, 'You're hired!'

"At that time, I was really being hired to do the English sequences. But when Todd went back to Hollywood to watch the dailies — they couldn't be viewed in England because they were in 70mm and there were no projectors — he put me in charge. When he came back, I was on the set, and he spoke to everybody except me. I thought, 'Oh my God! He obviously doesn't like it.' Eventually I went up to him and said, 'How was the stuff?' He looked me straight in the eye and said, 'It was lousy. It was so lousy that you're going to direct the whole picture!'"

As the shoot progressed, Anderson was treated to more memorable encounters with Todd. One in particular says volumes about the producer's zeal. "We were shooting in the Indian temple with 150 monkeys," Anderson relates. "It was a Friday night and we were going to shoot the next Monday. Todd and I were walking down the corridors, and the prop man was coming toward us. Mike asked him, 'How many monkeys have you got for Monday?' The guy told him we had 150. Mike said, 'No, that's not going to be enough. Get me another 100.' The guy said, 'Mr. Todd, where on a Friday night am I going to get another 100 monkeys?' Mike took the cigar out of his mouth and said, 'Somewhere is a guy who can.'"

The final budget for the film has been quoted at $7 million, but Anderson believes that figure to be high. In his book *The Moon is a Balloon*, David Niven wrote that production had to be halted several times "while strange, swarthy gentlemen arrived from Chicago for urgent consultations."

Anderson says production was never actually stopped, but the pinch was felt on numerous occasions. One such moment occurred during filming of the huge crowd scene in which Passepartout dashes away from irate Brahmans and jumps on a train headed across India. Anderson remembers, "I was shooting this scene and the phone rang. It was Todd. 'Whatcha doin'?' he asked. I said, 'Well, I'm just about an hour away from finishing. . .' and he said, 'No, you're not! Order dinners, order lights and keep

shootin'!' I told him that I didn't have the authority to do that and he said, 'You're the director, for God sake! You tell them you want lights, you want dinners and you'll get 'em!' I asked why and he said, 'I haven't got the money to pay the crowds!' I said, 'How will I know when to stop?' He said, 'When you see the white car come through with the black driver with the red bag, that's the money!'

"I did exactly what he said. I was watching the gate, which was half a mile away, and around 9:00 p.m. I saw the headlights in the distance. I could see the bag being held up high, and I could see the driver beaming. I knew the money had arrived to pay the crowd."

The production kept on its 75-day shooting schedule through the summer of 1955. Anderson credits its three production managers for helping to achieve the feat — one who would prepare, one who worked with the unit, and a third who stayed behind to clean up. This method helped to compensate for Anderson's lack of prep time; he had begun filming just two days after being hired, and quickly found himself on the road to London, southern France, the Mediterranean,

Spain, Egypt, India, Pakistan, Thailand, Hong Kong, Japan, Mexico, California and Colorado. Interiors were filmed at RKO Studios.

Things didn't always go smoothly, however. During filming of a street scene in Paris, one of the production managers, working without a permit, had a number of cars — including some owned by cabinet ministers — towed away. The incident almost landed Todd in jail. According to Niven, the producer paid two taxi drivers to stage a collision to keep the police at bay while he plied local constables with cigars.

The law finally drew the line when the production used a cable-controlled miniature balloon to match shots of Fogg's and Passepartout's balloon flight across France. "Of course, no permit had been granted for it!" Anderson recalls with a laugh. "When we couldn't produce one, the police took the balloon — *after* it had been successfully shot on film — and put it in the Bastille for the night. But Mike Todd rescued it, no doubt with many cigars and great fast-talk."

The filmmakers also faced the challenge of working with unfamiliar technology. Their lot was

made particularly tricky by the fact that rear projection wasn't possible in 70mm. When shooting the scene in which Indians attack Fogg and his party on a Colorado train, one entire side of the train had to be stripped off. A platform was then attached, and the camera was put on the platform. After the actors were arranged in the train, it was brought up to speed — about 40 m.p.h. — as the horses were started in the background. Only when everything in the scene was at full speed did Anderson call for action.

Anderson further faced the delicate task of dealing with so many top stars at once. "On one day," he says, "we had three Academy Award-winners who had never worked together — Victor McLaglen, Edmund Lowe and Andy Devine. The biggest job I had was to get them all to stop talking to each other and get to work! I simply didn't stop to think, 'These are *stars!*' I had pages to shoot and scenes to do."

The director occasionally benefitted from the advice of his more experienced cast members. "On the day Ronald Colman came down, I was filming toward David Niven, but David said to me, 'Mike, could you turn around and shoot Ronny? I know it's out of sequence, but he'd feel so much more comfortable coming straight in and doing something.' So I did it. That was Niven's thoughtfulness for his fellow artists."

Anderson was particularly impressed with the varied talents of Cantinflas. "During the rehearsal for the scene in which he snatches the tablecloth and does his dance, he danced for 2 ½ to three minutes," Anderson recalls. "I said, 'That was brilliant, Mario. Could you do it in 30 seconds?' He said, 'You got it.' And he did exactly the same thing, moving it down to 30 seconds or so. I shot it in one take.

"He also did his own stunts," the director adds. "When we shot the scene of Passepartout crawling around the hot air balloon, we were hanging over a hill. He went into the rigging himself. He wouldn't have a double, even though we had one on standby. While we were setting it all up, the phone rang. It was Mike Todd. He said, 'How's it goin'?' I answered, 'Well, at the moment it's going fine, except that Mario's up on the balloon hanging 500 feet. . .' He interrupted me and said, 'I don't want to know! Don't

Above: ***Director Anderson and cinematographer Lindon prep Cantinflas for his bike ride down a Paris boulevard.***
Left: ***Peter Lorre joins Cantinflas in a comic shipboard scene.***

Red Skelton, George Raft, an unidentified player, and Cantinflas gather around saloon pianist Frank Sinatra.

tell me!' and hung up."

Niven and Cantinflas *both* got involved with the action when a mishap occurred during a scene involving their balloon. As it was being lowered by an off-camera crane, the balloon crashed into a small Spanish building, toppling the roof. The actors came down with a hard thump, but were uninjured. "We couldn't get away with doubles or stunt people," Anderson explains, "because everything was being filmed in 70mm, and would be projected onto a big screen. You could see every detail."

Behind the camera during all of these hair-raising events was cinematographer Lionel "Curly" Lindon, ASC, whose resumé included *Going My Way*, *Road to Utopia*, and *Destination Moon*, as well as such later films as *The Manchurian Candidate* and *Grand Prix*. Anderson recalls that the pair got off to a somewhat dodgy start. "We were shooting on our big nightclub set in England, setting up the crane shot of David Niven's entrance," says Anderson, "At the end of the rehearsal I said to Lionel, 'What do you think?' He said, 'I don't get paid to think. I get paid to light.' I thought, 'Oh my God! I've never worked with a crew that behaved that way.' Later on, though, we became very friendly, and Lionel said to me, 'You know, for years I used to make suggestions to directors and they would say, 'Listen, *I'm* the director!' So I gave up making suggestions.'"

The film's cinematic style was influenced by Todd's desire to make viewers feel as if they were participating in the onscreen adventures. Passepartout's bicycle ride at the beginning, for example, allows the audience to ride along with the character; the filmmakers achieved the effect by locking a camera onto an extension suspended in front of Cantinflas as he pedaled away. A similar rig was created for a sequence involving the elephant that carries the travelers through the jungles of India. Still later in the film is a scene in which a manservant, scurrying to respond to his master's call, lowers himself to the first floor of their home in a dumbwaiter. The camera was placed above the character to track his descent.

Like *Oklahoma*, *Around the World in 80 Days* was filmed simultaneously in Todd-AO and CinemaScope, with two cameras placed side by side. There are actually two versions of the film in existence; scenes shot with both cameras were intermixed and edited into the final film. "If I got a great shot in Todd-AO and the CinemaScope camera could not get in the same setup, I would then shoot the scene again in CinemaScope," Anderson explains. "Todd's instructions were, 'If it's not such a good take, go with the Todd-AO one.' Of course, later on, when the CinemaScope print was used instead of the printed-down Todd-AO version, it meant that there were two different takes — some of them inferior in one version and different in another."

The 70mm film had to be refrigerated until it was used, so there were occasions when Anderson ran out of film and had to wait for a new batch to thaw.

Anderson admits that he was awed by the Bug-Eye lens. "The first time I used it was for one of the opening shots, when all of the carriages and soldiers go by in Hyde Park. When I looked through the

lens, the 150 people that I'd deployed were all in the middle of the screen, and the sides were empty! I asked for more people and spread them out. That lens had excellent peripheral vision. You had to have more people, more sets, more costumes, more scope. It was one of the great lenses of all time. The size of the curved Todd-AO screen was absolutely superb. It's never been repeated, and can't be, in the printed-down version."

When filming was complete, Anderson edited a first assembly and did a lot of looping. Todd took over the final cut. *Around the World in 80 Days* was a roadshow picture, with a prolonged pre-release at advanced prices that enabled Todd to make the most of his investment before the film was released to local cinemas. More cuts were made for the standard release.

The picture ultimately won 56 major awards, with 10 nominations from the Academy of Motion Picture Arts and Sciences (including a Best Director nod for Anderson). It won half of those: Best Picture, Editing, Screenplay Adaptation, Color Cinematography and Score. The film earned $23 million in domestic rentals, making it the second-highest-grossing picture of the year, right behind *The Ten Commandments*.

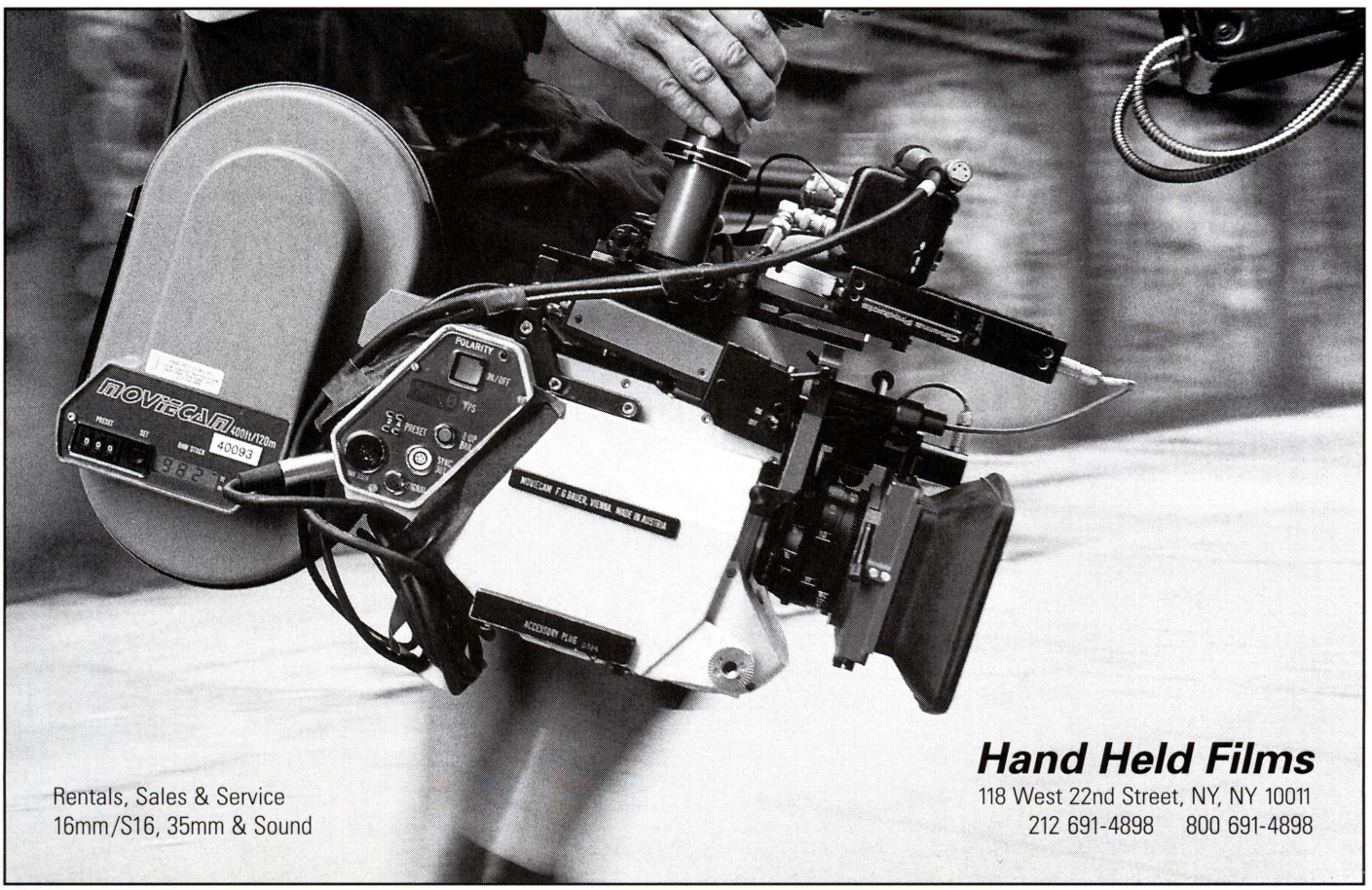
Todd had broken his losing streak. Joyous over the success of the film, he began hatching planning to film *Don Quixote*. His good fortune continued when he married Elizabeth Taylor and fathered a daughter, Elizabeth Frances. But finally, Fate intervened and dealt Todd a fatal blow: the producer died in a plane crash on March 22, 1958.

Anderson concludes, "The most amazing thing about *Around the World* is that it had the most stars ever to appear in a single picture, and the most people photographed in separate worldwide locations. Nearly four million air passenger miles were traveled. There were 140 locations, and we also executed more camera setups than any other picture to that point. More than 100,000 hot meals were served. At one point, a total of 70 makeup artists glued beards on 150 chins for a single scene. It was a record-breaker in many ways." ◆

Credits

A United Artists *release; in* Todd-AO *and* Eastman Color; *produced by* Michael Todd; *associate producer,* William Cameron Menzies; *director,* Michael Anderson; *screenplay by* S. J. Perelman, John Farrow, James Poe; *from the novel by* Jules Verne; *director of photography,* Lionel Lindon, ASC; *music,* Victor Young; *choreography,* Paul Godkin; *costumes,* Miles White; *prologue includes Paul Melies' 1902 film,* A Trip to the Moon. *Running time,* 168 minutes.

Players: David Niven, Cantinflas, Robert Newton, Shirley MacLaine, Charles Boyer, Joe E. Brown, Martine Carol, John Carradine, Charles Coburn, Ronald Colman, Melville Cooper, Noel Coward, Finlay Currie, Reginald Denny, Andy Devine, Marlene Dietrich, Luis Miguel Dominguin, Fernandel, John Gielgud, Hermione Gingold, Jose Greco, Cedric Hardwicke, Trevor Howard, Glynis Johns, Buster Keaton, Evelyn Keyes, Beatrice Lillie, Peter Lorre, Edmund Lowe, Victor McLaglen, Col. Tim McCoy, A. E. Mathews, Mike Mazurki, John Mills, Alan Mowbray, Robert Morley, Edward R. Murrow, Jack Oakie, George Raft, Gilbert Roland, Cesar Romero, Frank Sinatra, Red Skelton, Ronald Squire, Basil Sidney, Harcourt Williams, Ava Gardner.



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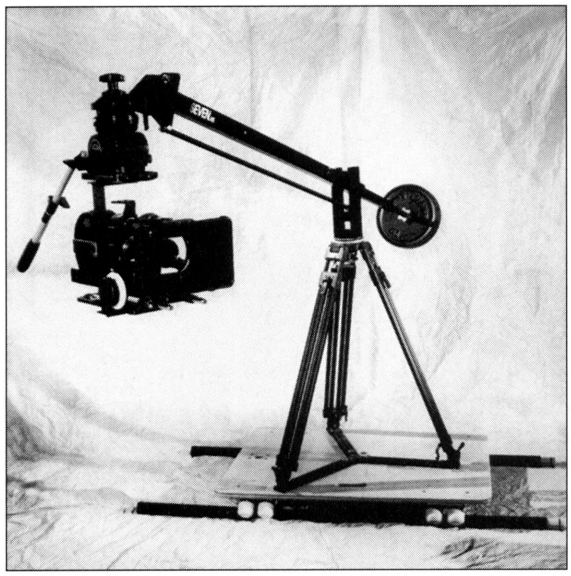


Advanced Jib and Dutch Head

Long Valley Equipment, based in New Jersey, now offers an advanced version of the Seven Jib. This latest edition, the Seven Jib II.A, has been powdercoated in black so that no shiny chrome parts will kick unwanted reflections onto the set. A built-in spirit level in the jib's base has been added to make setups faster, and a new solid aluminum lock-down knob with a captured washer speeds mounting. An underslung bracket has been introduced to facilitate low shots and tabletop work; it is available in several different sizes to accommodate various cameras and magazine heights, and cradles the camera from underneath rather than clamping onto delicate camera carrying handles. The Seven Jib's Super Track Dolly is also now offered by Long Valley.

The Dyna Dutch, which offers third-axis camera articulation, has also been introduced. It allows the camera to roll completely through 360 degrees with the lens and roll axes aligned if desired. Unlike other Dutch heads, which mount on top of standard heads, the Dyna Dutch offers a low-profile, counterbalanced movement so that the operator need no longer fight the head to keep the camera from tipping too far. Since the lens axis can be aligned with the roll axis by adjusting the L-shaped bracket on the Dyna Dutch, the frame remains centered through the roll. This allows the operator to maintain the frame and follow a subject.

The Dyna Dutch has a built-in fluid module that provides light damping, and it can be disengaged quickly for "whip spin" effects. Tapered roller bearings are used for support and are adjusted to eliminate any play. A removable handle can be rotated and locked throughout the entire 360-degree roll range. Camera weight capacity is based on the size of the standard fluid head upon which the Dyna Dutch is mounted, but it can be generally stated to be 50 pounds.

Long Valley Equipment, (908) 876-1022.

New Fuji Production and Intermediate Stocks

Fuji Film U.S.A., Inc., has introduced two new Super F Series films. The Fujicolor negative film F-500 is now available in 35mm Type 8571 and 16mm Type 8671. Both stocks are fine-grained and designed for indoor shooting under low-light conditions, outdoor filming of night scenes, and underwater and high-speed filming. The 8571 and 8671 also feature a new matting agent for improved optical printing, video transfer and laser scanning.

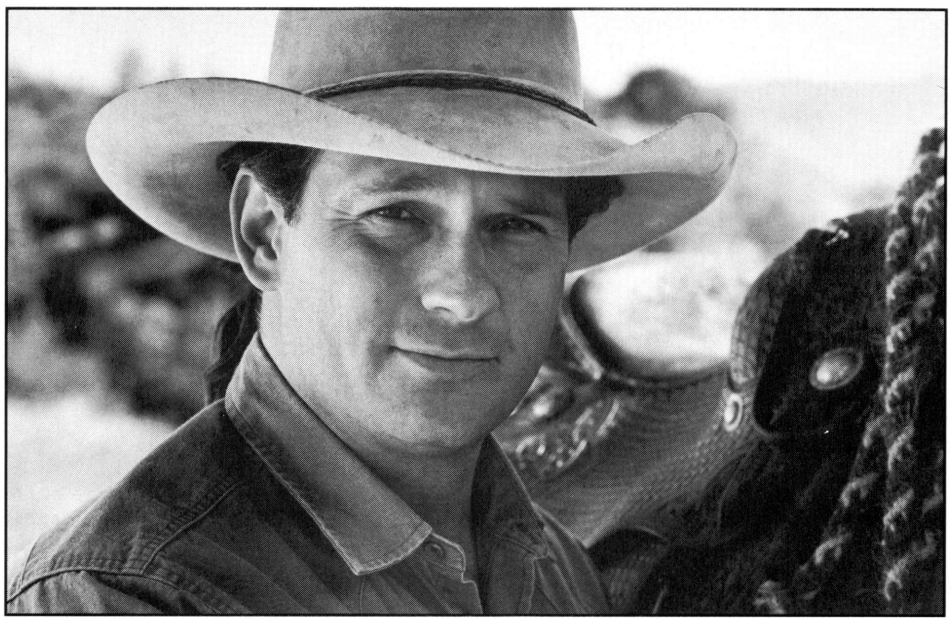
Fujifilm has minimized granularity by adding a light-sensitive speck to the double-structured grain, making the grain much smaller with no loss of high-speed sensitivity. This process, called Sigma Crystal Technology, offers sharper, ultra-fine images.

Like all films in the Super-F Series, 8571 and 8671 is composed of three emulsion layers, respectively sensitive to red, green and blue light, in addition to a protective layer and a yellow filter layer. The base is coated with a black resin backing that ensures scratch and static charge resistance and provides smooth film travel in the camera.

One problem with the long-term storage of process motion picture negatives is the deterioration, over time, of the cyan image. To remedy that, Fujifilm developed the Super Cyan Coupler, which greatly extends the life of the cyan image and enhances reproduction, working in conjunction with Fujifilm's Super L-Coupler to ensure an extended life for the color image. Processed Super F-Series films can be preserved for up to a century.

Fujicolor F-500 film is available in 35mm (8571) in 200-, 400-, 1,000- and 2,000-foot rolls; and in 16mm (8671) in 100-, 200-, 400- and 1,200-foot rolls.

Fuji has also unveiled a new Fujifilm Color Intermediate (FCI) film stock. This high-definition, ultra-fine grain intermediate stock is ideally suited for optical work and the exact reproduction of the gradation and color balance of originals. The speed balance of the stock's emulsion levels is designed to provide optimum results when making prints from color-mask-incorporated



Randall Gregg is entitled to wear the hat: he used to be a professional rodeo cowboy. Since 1974, he has worked on features and videos; and on commercials with such film makers as Leslie Dektor, Amir Hamed, Jim Manera and Fred Petermann.

"We weren't even using Clairmont's cameras on that shoot. But when we had a mystery problem, I sent them footage and Clairmont solved it," says Director of Photography Randall Gregg.

It turned out to be some latent edge numbers fogging part of the image area. The rawstock manufacturer later withdrew the whole batch.

"The film fogging episode happened years ago," says Randall Gregg, "But it shows how *accessible* everybody is at Clairmont."

New at the job

"I was new to L.A. I was new at being a First Assistant. We were on location out of town. When we got a phone call from our editor telling us we had light-struck dailies, I knew I needed help."

Blame the crew

"We were renting from another rental house—not Clairmont—because the producer had a deal of some sort. And now he was blaming the crew and the camera, naturally enough."

Called at home

"I called Denny Clairmont at his home. He said: "If you'll send me a piece of the footage, I'll solve your mystery." Which he did. It wasn't his camera, it wasn't his job, it wasn't his problem. But he took care of it."

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color negative or other color-duplicating films. This color mask image plays an important role in making release prints with excellent color.

Expanded exposure latitude produces performance under varied conditions, while anti-scratch, anti-static and surface lubrication properties are enhanced by a black resin backing on the film base. As with all Super F-Series films, FCI offers extended archival life when stored under industry-approved conditions.

FCI is available in both triacetate and polyester base in 65mm (Type 8702 TAC/Type 4702 PET); 35mm (Type 8502 TAC/4502 PET); and in 16mm (Type 8602 TAC).

Fujifilm also offers a machine-readable system on its 35mm color negative and intermediate film stocks. Called "Mr. Code," the system uses a bar code at the edge of the film, in addition to human-readable key numbers. Bar code scanners connected to synchronizers, telecines and other postproduction equipment can then automate processes such as locating specific negative frames, identifying film types and other time-consuming tasks.
Fujifilm (914) 789-8148, (212) 768-0550.

Parafoil Aerial Platform

Omega Aerospace introduces the L-25 model Paradactyl, a parafoil-based, unmanned aerial camera vehicle that can be used as a low-cost alternate to a manned helicopter when the situation is remote or too dangerous to put an operator at risk. The Paradactyl provides continuous real-time video link and a 4.6 cubic-foot cavity (20" x 20" x 14") that allows the craft to carry any video, 35mm or 70mm camera system weighing up to 350 pounds.

The Paradactyl can be controlled by a GPS-based autopilot and has been optimized for low-cost, user-friendly operation. A single radio downlink transmits the video, navigation and flight data. The link can provide high-resolution video from altitudes up to 12,000 feet. The operator can assign up to 99 way points with longitude, latitude and loiter time to define the desired flight pattern. The on-board autopilot will automatically control the heading and power setting. The vehicle is quiet (50 db/100m) and virtually undetectable at altitudes over 3,000 feet. Its maximum

speed is 30 m.p.h. and can stay aloft for up to three hours.

The L-25 Paradactyl comes complete and ready to fly with no assembly required.

Omega Aerospace, (206) 513-6177, (800) 280-0011; Fax (206) 513-8356.

Relay Lens System

OpTex now offers the Adapta Optic 35N, a relay lens system which has been designed to enable 35mm prime still camera lenses and 35mm motion picture lenses to be used with 2/3" video camera without making any modifications to the lens. The Adapta Optic does not alter the lenses' effective viewing angle: an 8mm still camera lens with a 180-degree diagonal view becomes a 2.6mm with the same angle of view, while a 24mm motion picture lens with a 48.1 degree horizontal angle of view becomes an 8.4mm with the same angle of view.

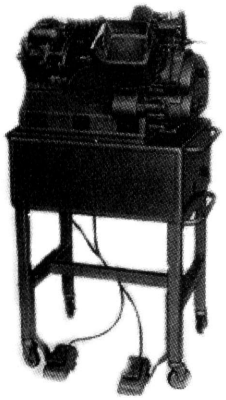
OpTex, 44(0)181-441-2199, Fax 44(0)181-449-3646; e-mail info@optexint.com; Web Site www.optexint.com/optex/.

Submersible Camera Housings

EWA-Marine introduces its transparent TV Camera Housings to protect camcorders against water, sand and chemical contamination. Submersible to 10 feet, the flexible housings are molded from UV-resistant PVC and keep the camera and controls visible to allow unrestricted operation from the outside. A built-in optical glass flat protects the lens and assures distortion-free images.

Even when the camera is snugly enclosed in the lightweight housing, the viewfinder can be moved freely from horizontal to raised position so that the operator can shoot either at shoulder or waist height.

The housings also feature double-profile closures, non-corrosive



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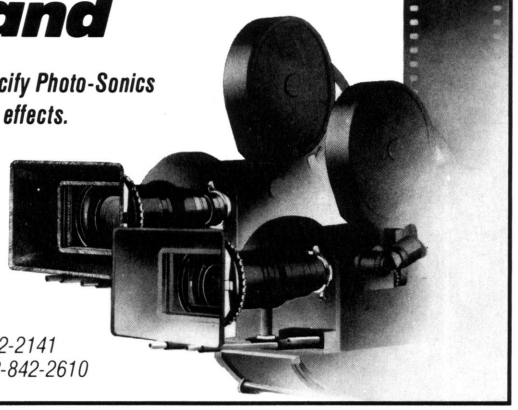

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Wide-Angle Broadcast Lens

Fujinon's Broadcast & Communications Products Division introduces the A10X4.8EVM/ERD wide-angle lens, the only ENG broadcast lens providing an 85-degree horizontal range of view. Featuring Fujinon's aspheric technology, electron beam coating and new internal focusing system, the lens can be used in extremely tight settings.

The internal focusing system has been further developed to eliminate pumping effects, providing the camera operator with a constant picture size during focusing. The lens is also equipped with an extra-large focusing ring and an ergonomically-designed, adjustable handgrip.

The A10X4.8EVM/ERD has a focal length of 4.8-48mm without an extender and 9.6-96mm with a 2X extender. The lens' MOD is 0.3 meters and its f-number is 1.8 from 4.8-34mm and 2.3 at 48mm. It measures 244.4mm and weighs 1.85kg.

Fujinon, (201) 633-5600.

Upgrade for Nite Sun

SMS has recently replaced the old magnetic ballasts in the generator truck of their 120-foot tall Nite Sun with six new Lightmaker 6/12K, flicker-free, electronic HMI ballasts. The change resulted in a greatly reduced vehicle weight. Lightmaker manufactures a full line of flicker-free, AC ballasts, including 575/1200W, 2.5/4K, 6/12K and 12/18K models.

The Lightmaker Company, (805) 257-1444, (800) 426-6284; Fax (805) 257-6197.

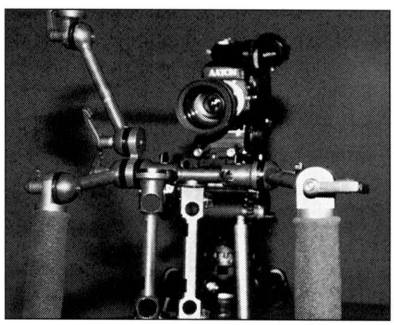
Power Pod Upgrade

Camera Service Center engineers have modified their inventory of two-axis Power Pod remote heads to increase the range of the device's applications and overall effectiveness. The units have been completely rewired using high-conductivity wiring. New slip rings and new CSC-designed power supply boards were installed. These modifications result in increased power efficiency.

The Power Pod can now be used with any fully accessorized Arriflex or Moviecam camera, including the 435 ES. The top speed and ramp times of high-speed cameras such as the 35-III and 435 ES are no longer reduced when using the Power Pod, even when the camera is equipped with several 12- or 24-volt external accessories, such as the Arri Lens Control System. The Power Pod, including camera and camera accessories, can now be run from a single battery or power supply.

To improve the quality of the video signal from the Power Pod, two galvanically separated and interference-free video channels were built into the modified units.

CSC, (212) 757-0906, Fax (212) 713-0075.



Camera Brace

Van Diemen France offers the Blue Modular Handle (BMH), which facilitates the comfortable and stable handholding of motion picture and video cameras. The system is composed of the camera fastening module, arms, handles and a bracket for mounting additional accessories such as LDC monitors and gear motors. The various parts of the BMH are assembled with a unique rosette wheel blocking design to allow for quick adjustments in all azimuths over a 360-degree range in six degree increments.

The BMH fits all professional film and video cameras by attaching to either their 19mm or 15mm rods, while it can also be mounted directly to Arriflex cameras by way of their rosette wheel attachment points. The device's modular design also allows the operator to keep the right and/or left handle on the camera at all times, on shoulder or on stand.

Van Diemen France (33) 1-34-

30-98-82; Van Diemen GB (44) 1-276-6122, Fax (44) 1-276-61549; Serious Gear, (206) 285-4776, Fax (206) 706-7255.

Image Depth Enhancement

Circlescan 4-D has announced an inexpensive and simple process for increasing the depth of images in motion picture and video images. The only special equipment required is a Circlescan 4-D unit, which attaches to any existing camera. Although standard dark/light glasses are needed to see the full dimensional effects produced by the process, a motion picture or video done in Circlescan 4-D can be viewed without the use of glasses. With or without glasses, the clarity of the image is improved. Film projection is handled by the use of a standard projector requiring no modifications. No special film processing is required, and existing film and video postproduction techniques remain the same.

Unlike familiar 3-D systems, Circlescan 4-D does not achieve its effect by creating images that pop from the screen. Rather, the process gives the viewer the impression of entering into a scene by achieving a dimensional relationship between the foreground, middle distance and background.

The lightweight Circlescan 4-D attachment works by photographing the image in a circular motion, effectively rendering it from 30 different points of view each second. Because the points are in such close proximity to each other, the human eye cannot discern the difference, and the brain registers an increased sense of depth.

The system is currently undergoing independent tests. Universal Pictures' optical department recently finishing a 35mm test, and the large-format specialists at World Odyssey are planning a 70mm project.

Circlescan 4-D, (310) 322-3177, Web Site www.epindustries.com.

Monitor Soft Case

Kata now offers a multipurpose monitor case called the MOMO, which performs as both a padded carrying case and a protective on-the-set support. The case is available in models to fit either 9" or 5" monitors. The MOMO's adjustable screen hood shades the monitor; side flaps can be loosened or folded

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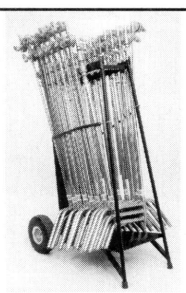

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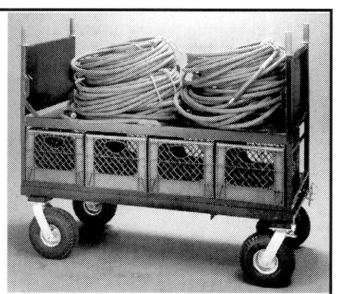

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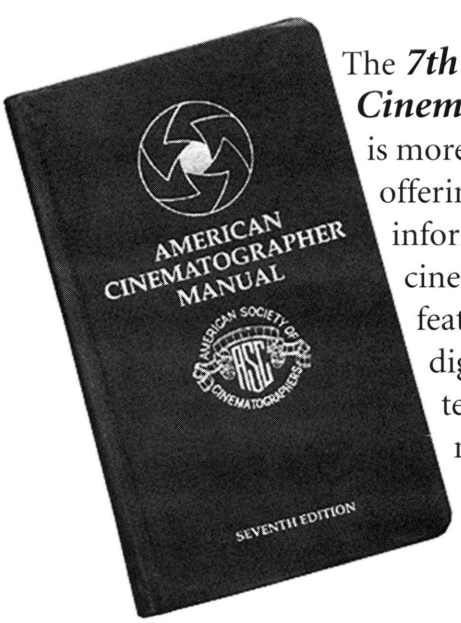

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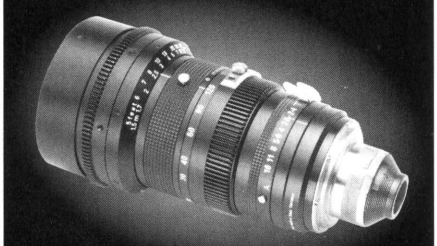

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Projection Video and Multimedia Monitor

Sony Electronics announces the VPD-S1800Q, the company's first projector featuring Texas Instruments' Digital Light Processing (DLP) technology, which is capable of offering high-quality video (NTSC, PAL, SECAM, HDTV) and computer graphics for large-size venues. The three-chip system has 800 x 600 lines of resolution and offers a brightness level of 1800 ANSI lumens. The DMD reflective device's light efficiency is better than transmission devices and has a higher fill factor of up to 90% to provide greater resolution.

The projection system will be added to the Sony family of projectors, which include LCD and CRT models

Sony has also introduced the PGM-200R1U, a rugged, fixed-frequency multimedia monitor with an optional modular scan converter. The monitor includes a 27-inch Super Fine Pitch Trinitron CRT with a built-in input expansion slot for Sony's custom BKM-201SC digital scan converter. Together they can display a wide range of video and computer signals in one high-quality fixed frequency. The expansion slot can potentially accept a variety of user-defined components and gives the monitor increased flexibility as a display platform.

The PGM-200R1U's wideband circuit produces a center resolution of 600 TV lines and features Sony's automated Beam Current Feedback (BCF) circuit for reliable picture quality and color reproduction. The BCF detects cathode current fluctuations bright and dark elements of the image, and feeds back correction data for stable color reproduction over extended periods of time. The unit is operated through a wireless remote control and includes onscreen menus for precise picture adjustment.

The optional BKM-102SC digital scan converter accepts a wide range of input signals from 15 to 85kHz, including NTSC, PAL, VGA, SVGA, Macintosh, SGI and others. The system then automatically converts the signal to the PGM-200R1U's fixed frequency of 31.5kHz. Additional features include a built-in line doubler for smooth, non-flickering images, automatic signal recognition and picture zoom function for use in video wall applications.

Sony Electronics, (201) 930-7834.

New Panasonic Products

Panasonic Broadcast and Television Systems Company announces the addition of the AJ-D3000 all-digital camcorder to its line of D-3 composite digital equipment. The compact, lightweight camcorder — an integrated digital signal processing camera and D-3 ½" digital composite VTR — features low power consumption, advanced 10-bit digital signal processing and permits up to 46 minutes of high-quality digital recording. The unit is ideal for digital cinematography and other ENG/EFP applications.

The camcorder weighs 15 lbs., and has a power consumption of 28W when recording. The camera section boasts advanced 10-bit digital processing and 10-bit quantization. It utilizes three ⅔-inch (400,000) FIT CCD's to achieve a horizontal resolution of 750 TV lines, minimum illumination of two lux and a high sensitivity of 2,000 lux a f8.0.

Operational improvements in the AJ-D3000 include built-in color playback capability. The unit features four channels of PCM audio and one analog cue channel, and built-in SMPTE time code generator (VITC/LTC). Eight scene files can be stored in memory, and the camcorders digital set-up allows numerical adjustment of parameters.

Panasonic also announces availability of the AJ-LT75 DVCPRO and DV-format videotapes, the AJ-LT75 can take news production anywhere for battery-operated portable editing.

The all-in-one laptop editor includes two full-featured DVCPRO VTRs, two color 6 ½-inch monitors, stereo speakers and a complete cuts-only editor in a compact, briefcase sized pack-

age. Within the system, each independent VTR can record up to 123 minutes, and is equipped with its own counter display, cassette slot and control panel with jog dial.

The system allows for editing and dubbing between the two VTR units, and permits recording from two different external sources at the same time, or sending playback or on-air transmissions to two different external units simultaneously. Both VTRs have industry-standard RS-422A (nine pin) remote control capability, allowing the DVCPRO VTRs to be used as playback decks in a three-machine edit configuration — even interformat configurations. The AJ-LT75 can also be used as dual-recording machines for back-up.

The portable and lightweight laptop editor will perform assemble, insert auto assembly and audio split editing. Each VTR features a built-in SMPTE/EBU time-code generator/reader, facilitation frame-accurate editing.

During playback, the search function shows pictures in forward or reverse at up to 32X normal speed with audio from DVCPROs cue track. The unit's DC/AC operation (with optional AC adapter) power supply provides flexibility in operation. The system can also playback mini DV cassettes with an adapter (the AJ-CS750).

Panasonic is also delivering the AJ-HDP500 digital high definition (HD) VTR processor, which in combination with a Panasonic AJ-D580 component digital VTR allows the VTR to operate as a digital HD recorder.

With this system, HD studio standard signals are image-compressed for digital recording with outstanding picture quality. Advanced intra-field compression combined with the D-5 format's high-density recording technology permits HD digital recording on compact half-inch cassette tapes, which are easy to handle and require little storage space.

The HD signal interface allows transmission of both video and audio signals over a single, coaxial cable. (The serial digital interface also provides simple connection of the VTR with the processor.) Simultaneous development of D/A and A/D converters, a serial/parallel converter and digital distribution equipment give the system all the interfaces necessary for existing digital and analog equipment. ➝

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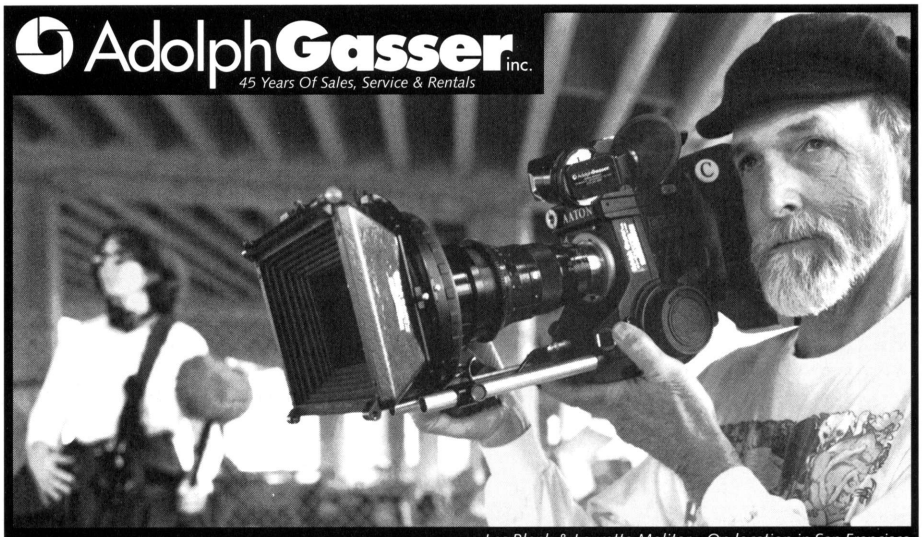

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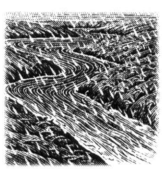

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The D-5 recorder is a full-featured component digital VTR. All D-5 features and functions are valid either in operation as a HD VTR with the HD processor system or as a standard definition VTR. The D-5 HD processor system records either 10-bit or 8-bit HD pictures at 1080i or 1035i active line rates, 60Hz or 59.94 Hz. The AJ-D580/AJ-HDP500 is eight rack units high (the VTR is ^U, the processor 2U) and lightweight, yielding a compact system that is easy to transport.

Panasonic, (800) 524 - 0864.

New 3-D Graphics Engine

Rendition, Inc., now offers its Vérité 3D accelerator engine, the V1000, to original equipment manufacturers. The V1000 will power a wide selection of add-in accelerator cards for the PC and enable a new generation of multimedia 3-D graphics. It provides both 2-D and 3-D graphics acceleration on a single chip with a combined RISC core and pixel pipeline account, resulting in higher performance and rendering speed. The V1000's features include perspective correction, which ensures that rendered images maintain their realistic quality; bilinear and trilinear filtering, which accurately determine which texture pixel is best to draw to screen to provide detailed images; anti-aliasing, which removes jagged edges on diagonal and curved lines; Alpha-blending, which determines the level of transparency of the component color and is often used to create fog effects or images seen through windows; and subpixel accuracy to provide more accurate rendering.

Rendition, Inc., (415) 335-5900, Fax (415) 335-5999; Web Site www.rendition.com. ◆

Antonio Capuano's *Pianese Nunzio:14 in May*

by Brooke Comer

New Italian Cinema Events (NICE) launched a New York festival six years ago as a venue for new Italian filmmakers. Based on the success of similar festivals in Morocco, Israel and France, NICE offers international exposure to cutting-edge cinema; the series of festivals has been instrumental in drumming up financial support from a lackluster economy. The Italian government has announced new measures to support the domestic movie industry, which hit a record low in 1996 with the production of a mere 77 feature films. But since many of those projects were the works of first- and second-time filmmakers, NICE had a strong talent base from which to select the seven feature films and seven shorts brought to America this year.

Director Antonio Capuano's *Pianese Nunzio: 14 in May*, representative of the lively, free-thinking Neapolitan School, shocked audiences at last year's Venice Film Festival for daring to present a homosexual priest as a heroic figure. The director's first film, *Vito and the Others*, concerned a child forced to become a killer, and won the International Critics' Award at the 1991 Venice Film Festival. *Pianese Nunzio* is also seen through the eyes of a young boy: a musically talented 13-year-old who, despite being the victim of a broken home, attains local fame by singing on bootleg tapes.

Nunzio's life is steeped in violence: he earns his few dollars from the mob, and he witnesses the murder of a young friend in a subway shootout. His only haven is the church where he attends school and often spends the night. But Nunzio is eventually pressured into betraying the young, outspoken priest who has befriended him.

Capuano drew inspiration for *Pianese Nunzio* from actual incidents in Sanità, the poorest quarter in Naples, where mob-related violence is a way of life. "Half of the story is true, and half is fiction," says Capuano, who fashioned his fictional feature from the true story of a beloved priest tried in court for his relationship with a young boy — also a talented singer — and from the trials of Sanità priests who decry the mob.

> "Even in the priest's chambers, we wanted the lights cut very dramatically, like a Caravaggio painting — sharp without a soothing effect."
>
> — Antonio Baldoni, cinematographer

The director explains that the Vatican sends young priests into difficult neighborhoods to fight the Neapolitan Mafia, also known as the Camorra. "These priests have a uniquely intimate rapport with the mobsters," says Capuano, "and they use this rapport to encourage the Camorra to repent, often publicly from the altar. When the priests are able to get to the mobsters, they are able to undermine the Camorra from the inside." This is one topic that the director says has not been addressed previously in Italian cinema.

Capuano and his cinematographer, Antonio Baldoni (*Vito and the Others*) had little trouble shooting in Sanità. "Everyone in the quarter accepted us and helped us, because they knew what were doing and why we were doing it," he explains. "They'd see us with our equipment and say, 'You're the people making the film about the priest!' The priest who

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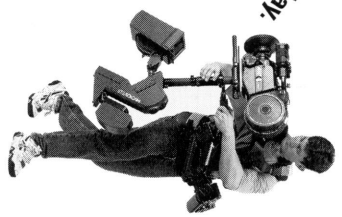
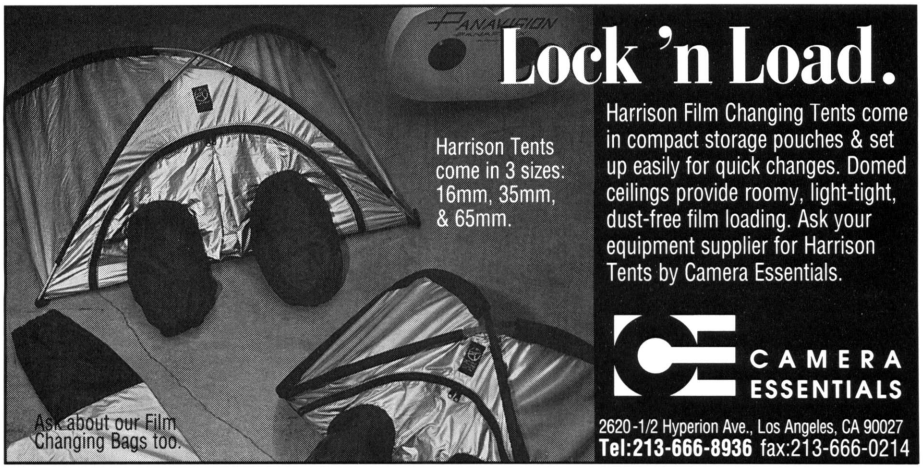


See next month's issue of American Cinematographer for more details about the European Steadicam workshop.



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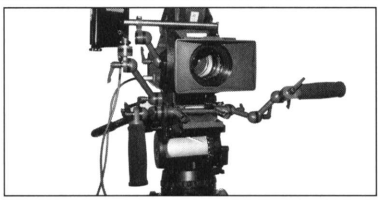
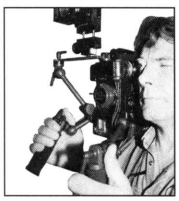

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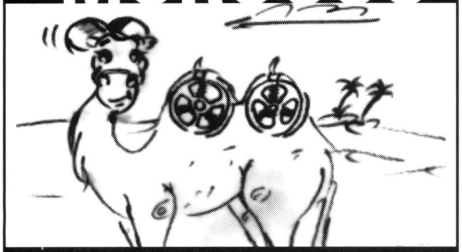

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made headlines when he admitted to having a relationship with a young boy is still in Sanità, awaiting a second trial, and he is adored by the people."

At Capuano's insistence, Baldoni strove for a baroque, contrasty look. The cameraman employed a Panavision and favored long shots, but he employed a full range of lenses. The several scenes shot in the church were purposefully kept very dark. "Even in the priest's chambers, we wanted the lights cut very dramatically, like a Caravaggio painting — sharp without a soothing effect."

Although the director says that he dislikes zoom shots because "they come across very flat and require more light which requires more money," he did find that a zoom lens was occasionally necessary during the production. "There were situations when we'd have to pan or dolly to get the shot we wanted, and it would have been too complicated and time-consuming without a zoom." In a comic aside, Capuano recalls that in the Seventies, "there was a saying that panning and dollying were left wing and zooming was right wing. But everything in Italy was ideological then."

The problems of shooting on the teeming streets of Sanità were secondary to the complications that the local Camorra might have caused if they had objected to a film documenting their corruption. Capuano recalls the day he arrived in the production office to find a strange man and his bodyguard sitting at the producer's desk. "He was smoking a cigar, looking very much like a character straight out of a Scorsese film. He had his feet up on the desk, and he was using the phone. He looked very much at home, as if it was his own office. I asked him what he wanted, and he said that he could make sure that there was no trouble during the filming. In return for this favor, he wanted to write a scene in the film with a small part for himself." He got what he wanted.

Other than this incident, the filmmakers received no interference from the Mafia. "We thanked the people of Sanità in the credits," says Capuano, "There no trouble, and they were very helpful. The Camorra knew we were just making a movie, despite the subject matter. They know that you can't make a revolution with cinema." ◆

Books in Review

by George Turner

Stanley Kubrick
by Vincent LoBrutto
Donald F. Fine, 665 pps.,
paper, $29.95

Much has been written about Stanley Kubrick's films, but very little about the enigmatic producer-writer-director who, between 1951 and 1987, has made a dozen features and two short subjects. All reflect a grimly bleak vision, a fervid perfectionism, and an admirable antipathy toward treading the same path twice. It seems incredible that *The Killing, Paths of Glory, Spartacus, Lolita, Dr. Strangelove, 2001: A Space Odyssey, A Clockwork Orange, Barry Lyndon, The Shining* and *Full Metal Jacket* all sprang from the same mind. A key to his work may lie in something Kubrick said early in his career: "Pain is a good teacher."

Kubrick, who lives quietly in England, neither helped nor hampered efforts to write this biography. Many myths have grown up around the filmaker because of his reclusiveness and the long intervals between his productions. LoBrutto, a film editor, faculty member of New York City's School of Visual Arts, and occasional contributor to *American Cinematographer,* scotches some of these yarns and reinforces others. The author dug through a mountain of research and interviewed many of Kubrick's friends, relatives, ex-wives and co-workers to produce this well-written, large-scale effort. The result is a surprisingly well-rounded portrait despite the subject's non-participation; considering Kubrick's apparent desire to remain mysterious, it's probably the most information we'll ever get.

Considerable attention is given the many problems that were encountered in making *2001,* including informative passages about the film's innovative special effects. [Incidentally, it wasn't really illness that led to the early departure from the project of the original visual effects director, Wally Gentleman, but rather what Hollywood refers to as "creative differences."] Duly reported are the contributions of such fine artists as the late John Alcott, BSC, "whose work as a cinematographer on *A Clockwork Orange, Barry Lyndon* and *The Shining* illuminated Kubrick's cinematic vision."

Texas' First Picture Show
by Frank Thompson
Republic of Texas Press,
243 pps., paper, $12.95

Everybody knows Georges Méliès, the pioneer French filmmaker. Less known is his older brother, Gaston, who came to Manhattan in 1903 to establish a branch of the Méliès Star Film Company. In 1910, the entire Star company fled a nasty Eastern winter and established the Star Ranch next to Hot Wells, a plush sulfur springs resort near San Antonio, Texas. The idea was to produce authentic Westerns using the outfit's roster of movie stars — Francis Ford, Edith Storey, William Carroll and Ben Cooper — along with real cowboys. The director was William Haddock and the cinematographer was William Paley, an Edison associate when the Kinetoscope was invented. Later, Star moved on to California, and also made films in Tahiti, Raratonga, New Zealand, Bora-Bora, Australia, Java, Cambodia and Japan.

Although the text concentrates on the Ranch period, all of the films produced by Gaston Méliès from 1903 to 1914 are listed. Information about the Texas films includes synopses, current reviews, and area newspaper accounts of the movie people. Penetrating research and an understanding of time and place add up to a fine record of a forgotten moment in movie history.

The writing is often eloquent. Following a poignant description of a visit to the ruins of Hot Wells, it's noted that the Ranch hands "produced nearly 80 one-reelers: fast-paced, raucous, sentimental, melodramatic Westerns and comedies. But there are no reminders of

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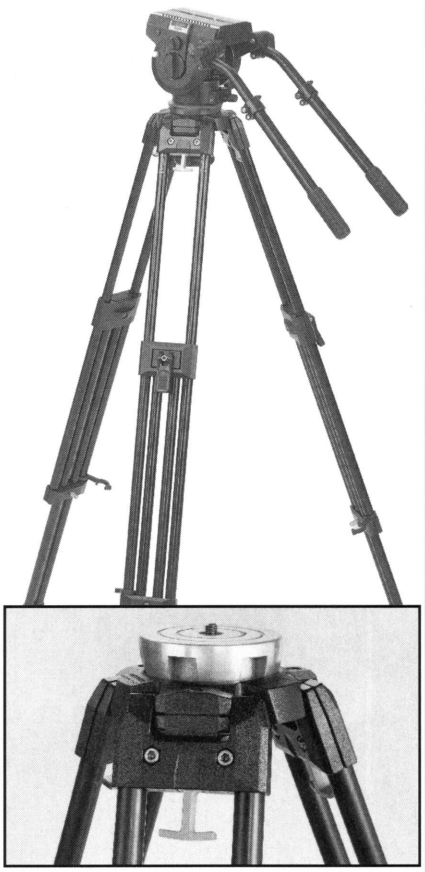

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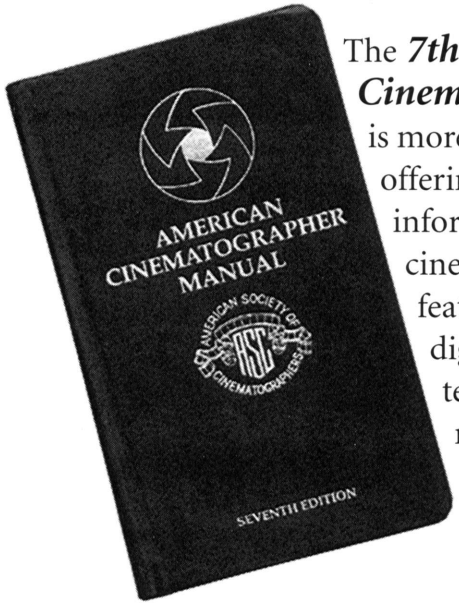

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Golden Horrors
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Bookstore shelves are so crowded with treatises on "Golden Age" horror movies that any bookworm who purchases everything available on the subject might end up in the unenviable position of having to seek Chapter 11 protection. It behooves the buyer to separate the wheat from the chaff by acquiring only those few tomes that do more than just rehash the same old stuff. This hefty volume (with its equally hefty price) is one that *does* have something to say about the classics. *Golden Horrors* offers in-depth coverage of 46 films made from 1931 through 1939, ranging from the expected *(Dracula, Frankenstein, Dr.Jekyll and Mr. Hyde*) to some rather obscure productions (the 1932 *The Lodger, The Secret of the Loch, The Return of Dr. X).* Each entry has cast and credits, a good synopsis, a detailed description of a memorable moment, assets, liabilities, reviews, and production notes. A large appendix covers more "borderline" pictures.

Senn is pretty tough on most of the entries. A strong antipathy to "static" camera shots and most comedy relief is evident throughout. Some of the opinions are arguable, and while reading I occasionally caught myself startling the dogs by growling aloud — but, shucks, ain't that what makes horse races? There are a few historical errors, such as citing Culver City as the location of the First National Studio.

Senn's approach is refreshingly free of star-worship, auteur theory and searches for Freudian "subtexts." Proper attention is paid to the important creative contributions of writers, cinematographers, art directors, composers, and other personnel. Observations concerning photographic style are more knowledgably set forth than in most film books. ◆

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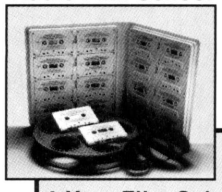

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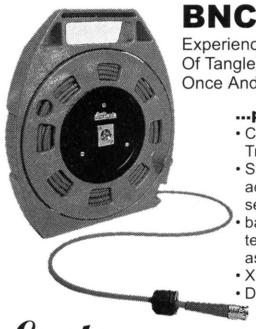

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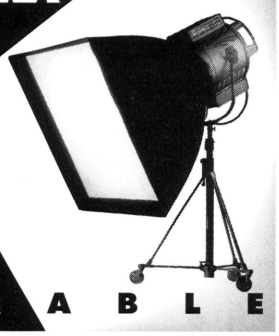

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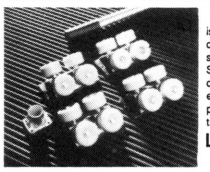

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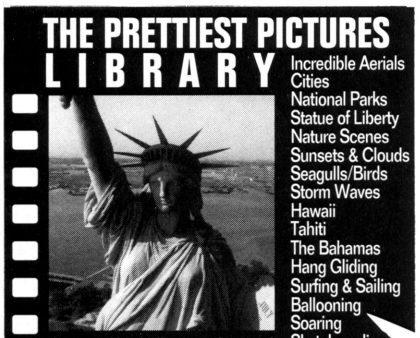

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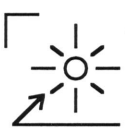

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Advertiser's Index

20th Century Fox 51
2.35 Research 38-39
AC 67, 119,122, 126, 134
A & J Cases 69, 94
ABC News Video 71
Action Sport 131
Adolph Gasser 121
Alan Gordon 128, 131, 132
Alaska Film Office 7
Archive Film 130
Arriflex 12-13

Backstage Equipment 119
Benjamin Centoducati 128
Birns & Sawyer 21, 95
Bogen Photo 43, 95, 125
Bolex Intl. 87

Camera Control 10
Camera Essentials 124, 131
Camera Service Center 25
Camware 131
CEI Technology 11
Century Precision 17, 94, 104, 129
Chambless 86
Chapman Studio 129
Chesapeake Camera 131
Chimera 132
Cine South 129
CineAsst 129
Cinekinetic 2, 116
Cinema Engineering 129
Cinema Products C-2, 123
Cinematography Electronics 119, 121
Cinequipt 94
Cineric 131
Cinovation 131
Clairmont 8-9, 67, 115, 126
Clamp Flag 129
Columbia College 126
Continental Film 93
County of Maui 50

Deluxe Laboratories C-3
Denecke 32
Ditrich Films 128
DN Labs, Inc. 129

Eastman Kodak 19, 75
Electric Image 53
Encore Video 65
Energy Film Library 129
Entertainment Lighting 34
Eurocrew 130

Fabulous Footage 132
Film Video Stock 127
Film Video Equipment 121
First Light 92
Fish Films 131
Fletcher Chicago 66
Focus Optics 131
Four Designs 127
Fries Engineering 105
Fuji Motion Picture 29

Gamma & Density 108
Geo Film 107
Glidecam Industries 22
Greg Hensley 127

H.K. Tecknica 129
Hand Held Films 67, 113
Hollywood Film Inst. 130
Hybrid Cases 131
Hydroflex 130

Image G 107
International Cinema Equipment 117
International Film & TV 76
Isaia & Company 47, 116

J.L. Fisher 93

K&H Products 117
K 5600 88
Kaye Lites 131
Kenworthy 59
Kino Flo 100 100
Kish Optics 129
LeatherCam 132
Lee Utterbach 59
Lent Equipt 132
Light Wave Systems 4
Lightning Strikes 22
London Intl. 116
Long Valley 133
Loom-Up 132
LTM 24
Lynx Robotics 105

MacGillivray 133
Mathews 52, 54, 120
Mazilview
Media Logic 122
Military Combat 131
Miller Canada 132
Miller Fluid Heads 6
Mississippi Film 80
MKA 68
Mole Richardson 66
Movie Tech 99
Moving Cam 45
MPS 124
Musco Mobile 26

Nalpak 127
NCE of Florida 128. 129
Nevada Film Commission 28
New York Film Academy 100
Norris Film 105
North Helicopters 64

O'Connor Engineering 77
Oppenheimer 107, 124

P+S Technik 78
Pacific Title 63
PAG, Ltd. 45
Panavision Corporate C-4
Panavision Florida 79
Panavision Hollywood 1
Panther GMBH 35
PC & E 89
Post L.A. 81
Prosource 133

Quantel 15

Rafael Estrella 129
RGB Color Lab 133
Rocky Mountain 129
Rosco 70

Schneider Lenses 102
SL Cine 128
SMS 129
Spacecam 27
Sprint 5
ST Productions 131
Stanton Video 108
Steadicam Operators 4
Super 8 Sound 118
Technological 101
Telecine 131
Tiffen 23
Tobin 36
Trovato 28
Tyler Camera 6

Unilux 16

Van Diemen 124
Vancouver Film 14
Versa Flex 132
Victor Duncan 33
Visual Products, Inc. 106, 127

Weaver 85
Wescam 37
Whitehouse 131
Wide Screen 133
William F. White 95, 132
Willy's Widgets 133

YCM Laboratories 57

ZGC, Inc. 99, 101
ZGC/Optex 69, 108, 118, 120

Back Issues Available

Jan	1992	*Star Trek* Turns 25
Jun	1992	*Far and Away, Patriot Games*
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In Memoriam

Murray Alvey, ASC, noted documentary and news cinematographer, died October 9, 1996, at his home in Silver Spring, Maryland. He was 83.

Alvey was born in New York City on October 16, 1912. In 1930 he got a job as an office boy at Pathé News, whose newsreels were released in sound and silent versions throughout the world. "I was also used as an assistant cameraman because the equipment was so heavy in those days that the cameramen usually needed someone to assist them," Alvey recalled. "I was a cameraman at times for the silent reels. In 1933 I flew from Washington, D.C. back to New York with the film coverage of Roosevelt's first inauguration, and returned to cover his second inauguration.

"It was company policy to advance the personnel from within. I became night news editor, then assignment editor for two years and for a short time I was the acting news editor. During this time I continued to associate myself with the cameramen and went out on assignments with them whenever there was an opening. Finally, in 1943, I became the bureau cameraman in Washington, D.C. and stayed with it until the rooster [Pathé's trademark] went out of business."

Alvey covered the conventions, campaigns and activities of presidents Roosevelt, Truman, Eisenhower, Kennedy, Johnson, Nixon, Ford, and Reagan. In the course of this he photographed heads of state from all over the world — Queen Elizabeth, Churchill, General and Madame Chiang, and many more in Washington and their own countries. He covered Truman's entire presidential campaign and was with him in Kansas City for his surprise victory over Thomas Dewey. The cameraman later accompanied Truman on his trip to South America and the return on the battleship *Missouri.* He was on all of Eisenhower's Goodwill Tours around the world — the 11 nation tour, the South American tour and the Pacific tour. He accompanied Kennedy to South America, Ireland, Germany and other points. Much of the Kennedy footage was used in the documentary *Years of Lightning, Days of Drums.* He traveled around the world and to Vietnam with Johnson, to China, Russia and Vietnam with Nixon, and to Japan and Russia with Ford. He was chosen as pool cameraman for the visits to the Pope of both Eisenhower and Kennedy. He filmed exclusive interviews with Kruschev in Vienna and Nehru in Belgrade, and toured the U.S. with Anwar Sadat.

After the demise of Pathé News, Alvey gravitated toward making one-hour documentary productions for USIA under Edward R. Murrow in the U.S.A. and South America. Later, he became chief cameraman for ABC News documentaries. His programs include *The Life of Sukarno,* filmed in Indonesia, *Mrs. Nixon, Lyndon Johnson, The Anatomy of Pop, Bear Bryant,* and *Life with the Coal Miners.* He also made the two-hour documentaries *Africa* and *Extra-Sensory Perception.*

Alvey was proud of "six half-hour specials on the civil rights problems in the South, made at a very difficult time for activists that got involved around 1962-63. These were produced by Hearst Metrotone News for ABC and finished up with a one-hour documentary. I interviewed all the Southern leaders, including Martin Luther King Jr. It was all very dangerous; we were being followed and our lines were being tapped."

Alvey is a former president of the White House News Photographers Association. He was chosen Newsreel Cameraman of the Year in 1956 by the National Press Photographers Association, and won the Distinguished Kodak White House News Photographers Association Achievement Award in 1984.

His wife of 53 years, Evelyn, died last February. He is survived by his brother, Leo, of Philadelphia, and his three grown children, Nancy Kessler, Jay Alvey and Janice Balaris, all of Maryland. Donations in his memory should be directed to Jewish Community Hospice, 6123 Montrose Road, Rockville, Maryland 20852. ◆

Jordan Scott Cronenweth, ASC, an award-winning director of photography, died on November 29, 1996.

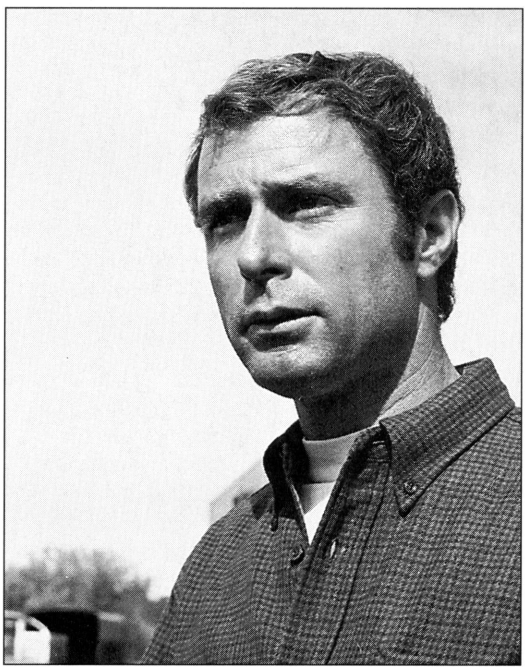
Cronenweth was born February 20, 1935 in Los Angeles. His father, William E. Cronenweth, was a noted still and portrait photographer at various film studios. His mother, the former Rosita Fourcher, was a performer in the Busby Berkeley Dance Company. Jordan graduated from North Hollywood High School and majored in engineering at Los Angeles City College for two years. During summers he worked in the stills laboratory at Columbia Studios in Hollywood. He soon developed a strong interest in cinematography and, during a personnel shortage, was sent on location in Oklahoma as an assistant cameraman. He soon became so successful in this field that he decided not to return to college.

Working with Conrad Hall, ASC proved to be a turning point in Cronenweth's career. He was Hall's assistant cameraman on *Harper* in 1966 and his operator the following year on *In Cold Blood,* for which Hall received an Academy Award nomination. The two became fast friends while working together on a half-dozen movies and undertaking several adventures.

By 1970 Cronenweth had been named a director of photography and was gaining attention for his work in such pictures as *Brewster McCloud, Play It as It Lays, The Nickel Ride, Zandy's Bride, The Front Page, Gable and Lombard* and *Rolling Thunder.*

In 1978 Cronenweth was diagnosed with Parkinson's Disease. Despite the debilitating effects of the disorder, he was determined to continue his career as long as possible. Amazingly, much of his most memorable work was achieved while he was under the shadow of this progressive, incurable illness. He worked with such top directors as Billy Wilder, Francis Ford Coppola, Robert Altman, Ken Russell, Jonathan Demme, Phil Joanou and Norman Jewison.

One of the cinematographer's most successful collaborations was with director Ridley Scott on *Blade Runner* (1982), a futuristic thriller pitting humans against android-like replicants in a Los Angeles of towering buildings and constant acid rain. The picture was a masterpiece of the unreal made believable through unusual cinematographic techniques. While not a box-office success during its initial theatrical release, the dystopian film has become one of the science-fiction genre's most influential and revered entries — due largely to its evocative neo-noir lighting and iconic imagery.



Impressively, Cronenweth brought his artistic eye to a diverse array of projects. The drama *Cutter's Way* displayed markedly superior photographic style, while the hallucinogenic *Altered States* stunned audiences with images almost beyond imagination. Other features bearing the cinematographer's distinctive style include *Best Friends,* the Talking Heads concert film *Stop Making Sense, Just Between Friends, Gardens of Stone,* the performance documentary *U2: Rattle and Hum, State of Grace* and *Final Analysis.* He also directed numerous television commercials through his company, Cronenweth, Inc., and conducted seminars at the American Film Institute.

Cronenweth's work was widely honored. In 1981 he was given the New York Film Critics Award for his work on *Cutter's Way.* In 1982 he received both the British Academy Award and the Los Angeles Film Critics Award for *Blade Runner.* He earned the International Broadcasting Award in 1983 for the direction and photography of *Imagine,* and his Corvette spot received the Best Car Commercial Award. *Film Comment* magazine named him in its Golden Dozen listing of film artists. In 1994 he won the Clio Awards' silver statue for Best Cinematography.

In 1987 the American Society of Cinematographers established the ASC Awards, a tradition now in its 11th year. The first program was held at the ASC Clubhouse in Hollywood and only one award was given, for Outstanding Cinematography in a Feature Film. Cronenweth earned the prize for his work on the period romantic-fantasy *Peggy Sue Got Married,* directed by Francis Coppola. Gregory Peck presented the newly designed award to the cinematographer's wife, Mrs. Shane Cronenweth, as the cameraman was on location at the time. The film also earned the director of photography an Academy Award nomination.

Jordan Cronenweth is survived by his mother, Mrs. William E. Cronenweth, of Santa Monica, and three children, Jeffrey, Timothy and Christie Lynn Cronenweth, all of Los Angeles. A memorial service was held on December 28, 1996, in the Sanctuary of the Bel Air Presbyterian Church in Los Angeles. Those wishing to make donations to his memory should direct them to National Parkinson's Foundation, 15840 Ventura Blvd., Ste. 215, Encino, CA 91436. ◆

From the Clubhouse

Photo by Juan Ruiz Anchía, ASC

Robert Primes, ASC (far end of table, with beard) addresses a discussion group.

Report from MADRIDIMAGEN '96

At MADRIDIMAGEN '96 — billed as "The Festival of the Art of the European Cinematographer" — 92 directors of photography from 16 countries and 111 film students were in attendance, including Juan Ruiz Anchía, ASC, AEC, and Robert Primes, ASC, representing the American Society of Cinematographers. Held in Madrid, Spain, from September 29 through October 5, the festival was hosted by the AEC (Asociación Española de Autores de Fotografia Cinematográfica). The event proved to be a homecoming for Spanish-native Anchía, who earned one of four prizes for feature-length cinematography given at the event, for his work on the feature *Lorca.* The other winners were Eduardo Serra, AFC for *Jude*; Vladimir Smutny for *Kolya,* and Tom Fährmann, BVK for the telefilm *The Sandman.*

Along with Primes, members of the international jury included Wolfgang Treu, BVK; Ronnie Taylor, BSC; Henning Kristiansen, DFF; Henning Bentsen, DFF; Frederic G. Kazcek, AAC; Michel Badour, SBC; Janos Zsombolayai, ACK; Vladimir Hollos, ASK; Hugo Colace, AAC and Jaromir Sofr, ACK. These attendees (with the exception of Colace) represented some of the 17 societies belonging to IMAGO, the European cinematographer's collective.

AEC members Tote Trenas, Porfirio Enríquez and Teo Escamilla conceived the idea of holding a festival by and for cinematographers; members of IMAGO, the ASC, the AMC (Mexico) and the South American associations were all invited to nominate entries. "They wanted this to be like a family affair for cinematographers," explains Primes, "so they wouldn't allow a film to compete unless the cinematographer was there. I liked the fact that we didn't just ship an award to someone who wasn't there. It wasn't about winning a prize. It was a wonderful opportunity to watch films and ask the cinematographers questions. Some of the entries were obviously made with extremely modest budgets, but we tried to not let that influence us."

Numerous festival workshops and seminars delved into many aspects of technology and also creative issues, from the restoration of historic films to the use of digital image manipulation during postproduction. There was also a memorable screening of a pristine print of *Faust*, directed by F.W. Murnau and shot by Carl Hoffman in 1925-26. The restoration project was directed by Luciano Berriatua, who collaborated with a team from the Spanish Film Library. Before the screening, Berriatua discussed Murnau's artistic motivations with the audience. The film was followed by a seminar conducted by Kodak scientist Tulsi A. Ram, who detailed restoration and preservation techniques.

Tiffen's Marty Ollstein also drew a large crowd when he demonstrated how many of that company's optical filters can now be replicated at computer workstations using the company's Crystal Image software, developed for the Kodak Cineon system.

Other events included retrospectives featuring the works of Vittorio Storaro, ASC, AIC, and Gabriel Figueroa, AMC; a meeting of the IMAGO membership; a competition for film schools held in Prague, which was won by FAMU; and a touching ceremony during which the annual Prismas AEC De Honor award was presented to both Freddie Young, BSC, and Figueroa.

"Where else can cinematographers from so many different countries hear Gabriel Figueroa discuss why he composed certain shots, and why he showed the audience feet instead of faces in some famous scenes?" Juan Ruiz Anchía asks.

Primes presented a seminar on the future of digital television (DTV) in the United States. He described the three-year battle that the ASC and others in the creative community have been fighting to retain the artistic integrity of their work on future TV screens. "They were very tuned into the issues," says Primes, "and urged us to continue fighting for a DTV standard which could someday serve the world. But the best part of the event was meeting people and seeing films that we normally wouldn't see. It gave me a chance to encounter the sensibilities of cinematographers working in different cultures."

Primes says that while the judges had different opinions about what they liked, everyone agreed that the movies selected were of the highest order. The panel's main criteria were daring and originality, and whether the cinematography was appropriate for the story. Describing his reaction to Anchía's work on *Lorca*, Primes says, "The very heavy overexposure and extreme contrast and darkness that Juan used isn't postcard-pretty — it's gutsy, strong and 'beautiful' in how it works with the story. The camera movements are in the MTV style, with a lot of panning back and forth, but he did it with delicacy, and it fit the picture's mood and content."

Anchía saw the festival from a different perspective, as a spectator/participant rather than a judge. He was generally enthused by the cinematography and the European movies he saw, but he agrees with Primes that some of the better efforts probably weren't judged because of the requirement that the cinematographers be present. "It was a controversial issue, but this was more than a festival. It was a gathering of cinematographers. There is much to be gained from interacting with cinematographers from different cultures. I came home to Los Angeles feeling like part of an international community."

— Bob Fisher

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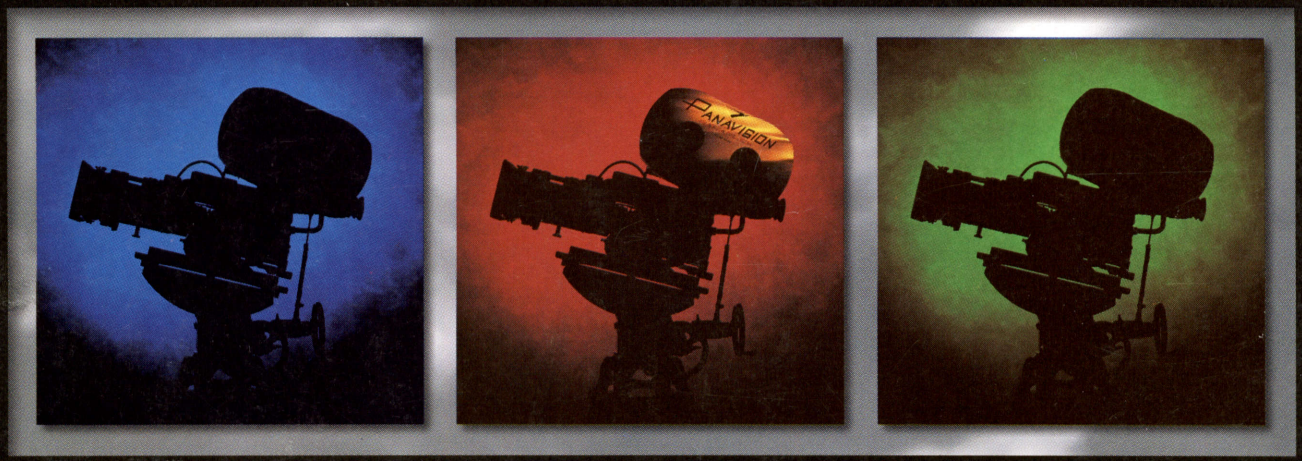

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